United States Department of Agriculture

Natural Resources Conservation Service

In cooperation with United States Department of the Interior, Bureau of Land Management; University of Idaho, College of Agriculture; and Idaho Soil Conservation Commission

Soil Survey of Adams-Washington Area, Idaho, Parts of Adams and Washington Counties

How to Use This Soil Survey

General Soil Map

The general soil map, which is a color map, shows the survey area divided into groups of associated soils called general soil map units. This map is useful in planning the use and management of large areas.

To find information about your area of interest, locate that area on the map, identify the name of the map unit in the area on the color-coded map legend, then refer to the section **General Soil Map Units** for a general description of the soils in your area.

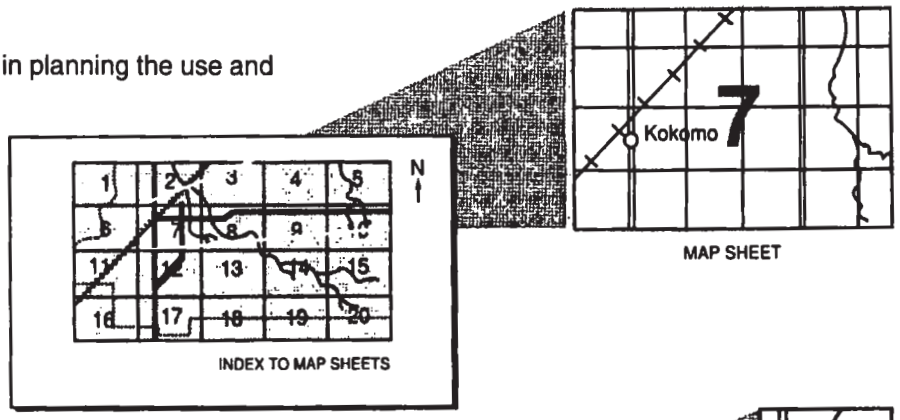
Detailed Soil Maps

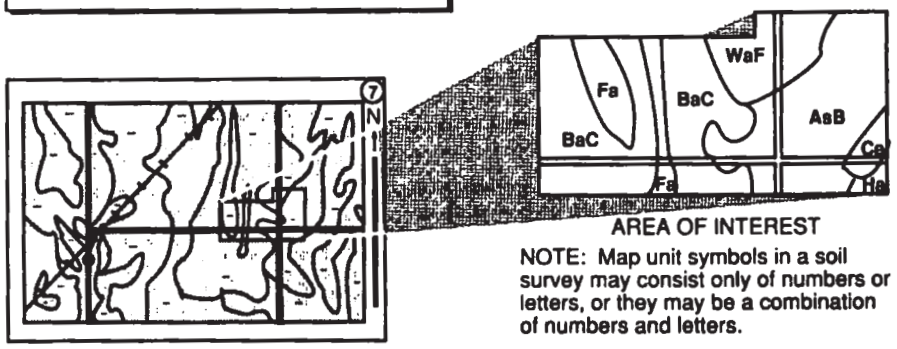
The detailed soil maps can be useful in planning the use and management of small areas.

To find information about your area of interest, locate that area on the **Index to Map Sheets**. Note the number of the map sheet and turn to that sheet.

Locate your area of interest on the map sheet. Note the map unit symbols that are in that area. Turn to the **Contents**, which lists the map units by symbol and name and shows the page where each map unit is described.

The **Contents** shows which table has data on a specific land use for each detailed soil map unit. Also see the **Contents** for sections of this publication that may address your specific needs.





MAP SHEET

NOTE: Map unit symbols in a soil survey may consist only of numbers or letters, or they may be a combination of numbers and letters.

This soil survey is a publication of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (formerly the Soil Conservation Service) has leadership for the Federal part of the National Cooperative Soil Survey.

Major fieldwork for this soil survey was completed in 1988. Soil names and descriptions were approved in 1990. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 1988. This survey was made cooperatively by the Natural Resources Conservation Service and the United States Department of the Interior, Bureau of Land Management; University of Idaho, College of Agriculture; and Idaho Soil Conservation Commission. The survey is part of the technical assistance furnished to the Adams Soil and Water Conservation District and the Weiser River Soil Conservation District.

Since the publication of this survey, more information on soil properties may have been collected, new interpretations developed, or existing interpretive criteria modified. The most current soil information and interpretations for this survey are in the Field Office Technical Guide (FOTG) at the local office of the Natural Resources Conservation Service. The soil maps in this publication may exist in digital form in a full quadrangle format. The digitizing of the maps is in accordance with the Soil Survey Geographic (SSURGO) database standards. During the digitizing process, changes or corrections to the maps may have occurred. These changes or corrections improve the matching of this survey to adjacent surveys and correct previous errors or omissions of map unit symbols or lines. If digital SSURGO-certified maps exist for this survey, they are considered the official maps for the survey area and are part of the FOTG at the local office of the Natural Resources Conservation Service.

Soil maps in this survey may be copied without permission. Enlargement of these maps, however, could cause misunderstanding of the detail of mapping. If enlarged, maps do not show the small areas of contrasting soils that could have been shown at a larger scale.

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Cover: Rush Creek area, about 5 miles north of Cambridge. Meland silt loam in foreground, Jacknife loam on fan terraces, Langrell loam on stream terraces, and Meland stony loam and Riggins extremely stony loam on foothills in background. Mountains in background are outside the survey area.

Additional information about the Nation's natural resources is available on the Natural Resources Conservation Service home page on the World Wide Web. The address is http://www.nrcs.usda.gov (click on "Technical Resources").

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Issued 2001

Foreword

This soil survey contains information that affects land use planning in this survey area. It contains predictions of soil behavior for selected land uses. The survey also highlights soil limitations, improvements needed to overcome the limitations, and the impact of selected land uses on the environment.

This soil survey is designed for many different users. Farmers, ranchers, foresters, and agronomists can use it to evaluate the potential of the soil and the management needed for maximum food and fiber production. Planners, community officials, engineers, developers, builders, and home buyers can use the survey to plan land use, select sites for construction, and identify special practices needed to ensure proper performance. Conservationists, teachers, students, and specialists in recreation, wildlife management, waste disposal, and pollution control can use the survey to help them understand, protect, and enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. The information in this report is intended to identify soil properties that are used in making various land use or land treatment decisions. Statements made in this report are intended to help the land users identify and reduce the effects of soil limitations that affect various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are shallow to bedrock. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

These and many other soil properties that affect land use are described in this soil survey. Broad areas of soils are shown on the general soil map. The location of each soil is shown on the detailed soil maps. Each soil in the survey area is described. Information on specific uses is given for each soil. Help in using this publication and additional information are available at the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

Richard Sims
State Conservationist
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Soil Survey of Adams-Washington Area, Idaho, Parts of Adams and Washington Counties

By Lawrence M. Rasmussen, Natural Resources Conservation Service

Fieldwork by Lawrence M. Rasmussen, Elmer L. Hill, and Steven J. Borchard, Natural Resources Conservation Service; Dennis L. Moore, David J. Graf, and John G. Bokor, Idaho Soil Conservation Commission; and Paul J. Seronko, Bureau of Land Management

United States Department of Agriculture, Natural Resources Conservation Service, in cooperation with
United States Department of the Interior, Bureau of Land Management; University of Idaho, College of Agriculture; and Idaho Soil Conservation Commission

ADAMS-WASHINGTON AREA adjoins Oregon along the Snake River in the southwestern part of Idaho (fig. 1). It includes all of Adams and Washington Counties except the Payette National Forest. The Adams County part consists of 312,060 acres, or about 487 square miles, and the Washington County part consists of 793,236 acres, or about 1,240 square miles. The total area is 1,105,296 acres, or about 1,727 square miles.

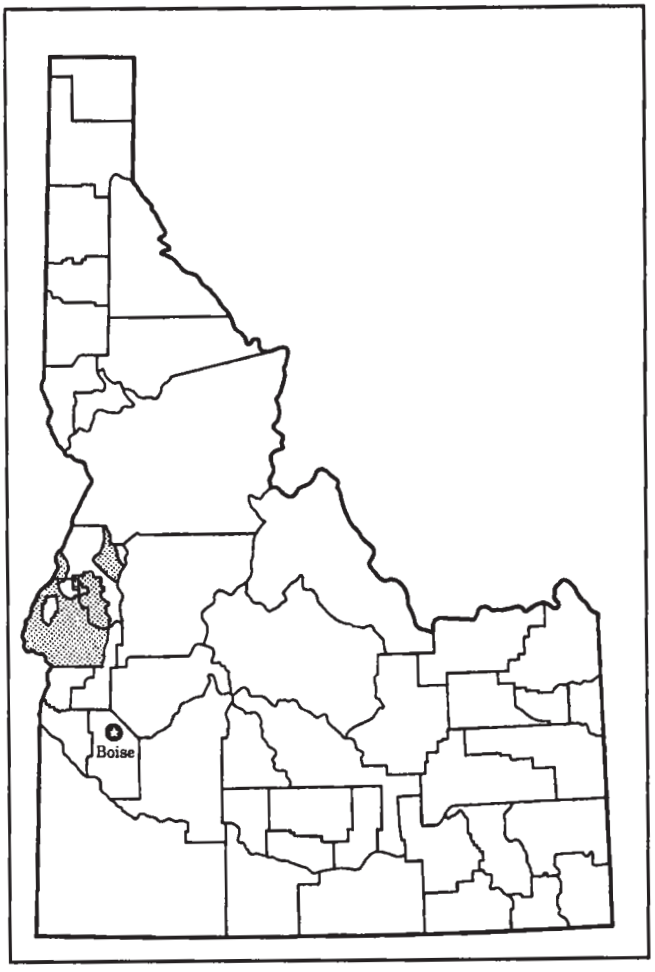

Figure 1.—Location of Adams-Washington Area in Idaho.

General Nature of the Survey Area

This section provides general information about the survey area. It discusses history and development; water supply; industry, transportation, and recreation; agriculture and population; physiography; and climate.

History and Development

Captain William Clark of the Lewis and Clark Expedition of 1804-06 wrote in his diary that the Nez Perce Indians drew a map in the sand of the rivers and mountains north and south of the Clearwater River. The map showed the Salmon River and a stream flowing south into the Snake River. Captain Clark named this stream the Weiser River after Peter Weiser, a Revolutionary War veteran, a hunter, and the cook for the expedition.

In 1811 the Wilson Price Hunt and Ramsey Cook parties met at the mouth of the Weiser River after traveling across Idaho on opposite sides of the Snake River. In 1863 William Logan and his wife built the first

house along the Weiser River. That same year the Territorial Legislature granted R.P. Olds a license to operate a ferry on the Snake River. The ferry was located 10 miles below the mouth of the Weiser River. By 1870 a settlement named Weiser Bridge had been established.

The Council Valley area was first settled by George Moser in 1876. In 1879 Washington County was formed from parts of Ada and Idaho Counties. In 1911 Adams County was formed from the northern part of Washington County.

In 1884 the Oregon Short Line Railroad reached the present site of the town of Weiser. Four years later the railroad was built from Weiser to Meadows Valley.

The Homestead Act of 1903 gave 320 acres of public land to each family that settled in the area. That amount was reduced to 160 acres in 1916. Rapid growth and development occurred during this period. After the 1940's, most of the small farms were consolidated into much larger ones.

Water Supply

Most crops in the area are dependant on irrigation. Even in the northern part, where precipitation is higher, supplemental irrigation increases crop production. The main source of irrigation water is the Weiser River and its tributaries. Early settlers built irrigation ditches and diverted water from the many streams in the area. As time passed these ditches were enlarged and extended. One of these projects was the 20-mile-long Galloway Canal. Work was started on this canal in about 1885. It irrigates most of Weiser Valley north of the Weiser River. Farms south of the Weiser River are irrigated by a 7-mile extension of the Lower Payette Canal, which flows into Washington County. This extension was built in 1890. The water in this canal is diverted from the Payette River. Lands around the towns of Cambridge, Council, Indian Valley, Midvale, and New Meadows and in many smaller valleys are irrigated from ditches carrying water diverted from local streams.

A lack of water late in summer prompted the construction of reservoirs for water storage. The largest is the 52,000 acre-foot Crane Creek Reservoir in Washington County, which was completed in 1906. The newest is the 13,500 acre-foot Mann Creek (Spangler) Reservoir built in 1967. Paddock Reservoir, built in 1917, provides water for Payette County to the south. Other smaller reservoirs in Washington County include the Barton and Soulen Reservoirs.

Reservoirs in Adams County include the 10,000 acre-foot Lost Valley Reservoir, which was built in 1908; the 7,780 acre-foot Ben Ross Reservoir, which was built in 1936; and the 5,300 acre-foot Goose Lake Reservoir, which was built in the early 1920's. The Brundage Reservoir was rebuilt in 1988, and it now has 7,300 acre-feet of storage. Other smaller reservoirs in Adams County include the Fish Lake, Hornet Creek, and Twin Lakes Reservoirs. Many other small, unnamed reservoirs and ponds are used as a source of water for irrigation and livestock. In a few areas, irrigation water is pumped from streams and wells.

The survey area also has sources of hot water that can be developed for geothermal use.

Industry, Transportation, and Recreation

The survey area has a small industry base. Lumber mills are in Council and Tamarack. A wood finishing plant and a prebuilt/manufactured homes plant are near Weiser. Most of the industry in the area is related to agriculture, including several produce packing plants, a frozen food plant, a dry corn and beans plant, and several small grain storage and shipping facilities. Milk and sugar beets, sweet corn, and other produce are shipped to processing plants outside the area. Brownlee, Oxbow, and Hells Canyon Dams on the Snake River provide electricity for the area.

Highway 95 transverses the survey area from north to south. The area has a network of roads, including paved and gravel roads and some unimproved roads. The Union Pacific Railroad crosses the southern end of the area with a branch line going to Tamarack. Airports are at Council, New Meadows, and Weiser. A commercial airport is at Boise, which is about 90 miles to the south of the area. Buses and trains operate from Ontario, Oregon, which is about 25 miles to the south of the area. Several trucking companies service the area.

The survey area offers many recreational opportunities. The many streams and reservoirs provide a wide variety of fishing opportunities. Hunting is a popular activity. Species available for hunting range from rabbits and ground squirrels to big game animals and a variety of upland game birds and waterfowl. Camping facilities are available throughout the area. Natural hot water swimming pools and golf courses are near Council, New Meadows, and Weiser. Also near New Meadows is a planned resort community. Weiser is noted for its annual National Old Time Fiddler's Contest *(13)*.

Agriculture and Population

The early settlers mainly raised livestock. Limited irrigation was used to increase forage production and to raise some small grain. With the expansion of farming,

orchard crops gained popularity. The long growing season in the southern part of the area allows for the growing of fruit, beans, corn, onions, potatoes, sugar beets, and vegetables for seed in addition to the traditional hay, pasture, and small grain.

Corn for silage is grown in the Midvale and Cambridge areas, but in the Council area crops are limited to hay, pasture, and small grain. The climate in the New Meadows area is marginal for growing oats. As the elevations increases north of Weiser, precipitation also increases, allowing for cultivation of nonirrigated small grain. About 50,000 acres of nonirrigated cropland and 65,000 acres of irrigated cropland are in the area.

Adams County has only two incorporated towns—Council, population 917, which is the county seat, and New Meadows, population 576. The total population of Adams County is 3,347. Weiser, population 4,771, is the county seat of Washington County. The other towns in Washington County are Cambridge, population 428, and Midvale, population 205. The total population of Washington County is 8,803 *(12)*.

Physiography

The survey area includes nearly level flood plains and very gently sloping to moderately sloping terraces along the rivers and larger streams. Adjacent to the flood plains are high terraces, some of which have been dissected to form rolling hills. A large part of the area consists of gently sloping to very steep basalt foothills and mountains. In the northern part are steep granitic mountains. Elevation ranges from 1,600 feet along the Snake River to about 6,000 feet in the mountains southeast of New Meadows.

The Snake River flows north along the western edge of the area. The main drainageway is the Weiser River and its tributaries, which flow southwest into the Snake River at Weiser. The Little Salmon River flows north from the New Meadows area.

Climate

The agricultural regions of Washington County and the southern part of Adams County have hot, dry summers and cool winters. There are significant local variations in climate because of the topography. The much smaller area around New Meadows, which is at an elevation of 3,868 feet, is cooler and wetter than the Cambridge area, which is at an elevation of 2,651 feet. Weiser, at an elevation of about 2,100 feet, is representative of the drier, warmest part of the area.

In December the temperature at New Meadows is about 5 degrees F cooler than that at Cambridge, but in June it is about 8 degrees cooler. The average annual precipitation at New Meadows typically is about 5 inches more than that at Cambridge. Precipitation peaks in December and January, ranging from 2 to 4 inches per month. The average monthly precipitation steadily decreases in spring and summer, and it is lowest in July.

Table 1 provides data on temperature and precipitation for the survey area as recorded at Cambridge, New Meadows, and Weiser. Table 2 provides data on the first freeze in fall and the last freeze in spring. Table 3 provides data on the length of the growing season. The growing season at New Meadows typically is about 37 days, which is 100 days less than that at Cambridge. The growing season at Weiser typically is about 164 days, which is 27 days more than that at Cambridge.

In January, the mean temperature is about 26 degrees at the lower elevations near Weiser, 22 degrees at Cambridge, and 18 degrees at New Meadows. The lowest temperature on record, which occurred at New Meadows on December 24, 1983, is -45 degrees. In July, the average temperature is about 73 degrees at Weiser and Cambridge and 63 degrees at New Meadows. The highest temperature on record, which occurred on July 19, 1960, at Cambridge and on July 30, 1988, at Weiser, is 107 degrees.

Growing degree days, shown in table 3, are equivalent to "heat units". During the month, growing degree days accumulate by the amount that the average temperature each day exceeds a base temperature (32 degrees). The normal monthly accumulation is used to schedule single or successive plantings of a crop between the last freeze in spring and the first freeze in fall.

The mean annual precipitation is about 25 inches at New Meadows, 20 inches at Cambridge, and 11 inches at Weiser. Of this, about 29 percent usually falls in April through September. In 2 years out of 10, the rainfall during this period is less than 5 inches. The heaviest 1-day rainfall during the period of record was 2.6 inches at Cambridge on June 4, 1956. Thunderstorms occur on about 19 days each year, and most occur in spring and summer.

The average seasonal snowfall is about 84 inches at New Meadows, 46 inches at Cambridge, and 16 inches at the lower elevations around Weiser.

The average relative humidity in the afternoon is about 25 percent in July and 65 percent in January. Humidity is highest at night, and the average at dawn is 60 percent in July and 90 percent in January.

The sun shines 85 percent of the time possible in July and 35 percent in January. The prevailing wind is from the southeast in September through April and

from the northwest in May through August. Average windspeed is highest, 11 miles per hour, in March.

How This Survey Was Made

This survey was made to provide information about the soils and miscellaneous areas in the survey area. The information includes a description of the soils and miscellaneous areas and their location and a discussion of their suitability, limitations, and management for specified uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They dug many holes to study the soil profile, which is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the material in which the soil formed. This material is devoid of roots and other living organisms and has not been changed by other biological activity.

The soils and miscellaneous areas in the survey area are in an orderly pattern that is related to the geology, landforms, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landscape or with a segment of the landscape. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landscape, soil scientists develop a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientists to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted color, texture, size, and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, fields, roads, and rivers, all of which help in locating boundaries accurately.

The descriptions, names, and delineations of the soils in this survey area do not fully agree with those of the soils in adjacent survey areas. Differences are the result of a better knowledge of soils, modifications in series concepts, or variations in the intensity of mapping or in the extent of the soils in the survey areas.

General Soil Map Units

The general soil map at the back of this publication shows broad areas that have a distinctive pattern of soils, relief, and drainage. Each map unit on the general soil map is a unique natural landscape. Typically, it consists of one or more major soils or miscellaneous areas and some minor soils or miscellaneous areas. It is named for the major soils or miscellaneous areas. The components of one map unit can occur in another but in a different pattern.

The general soil map can be used to compare the suitability of large areas for general land uses. Areas of suitable soils can be identified on the map. Likewise, areas where the soils are not suitable can be identified.

Because of its small scale, the map is not suitable for planning the management of a farm or field or for selecting a site for a road or building or other structure. The soils in any one map unit differ from place to place in slope, depth, drainage, and other characteristics that affect management.

The general soil map units in this survey have been grouped into general kinds of landscape for broad interpretive purposes. Each of the broad groups and the map units in each group are described in the following pages.

Some soil boundaries and names on the general soil map for this survey area do not match those on the general soil maps for the adjacent soil surveys of Gem County Area and Payette County, Idaho. These differences are the result of changes in series concepts, variations in slope groupings, and application of the latest soil information. A detailed explanation of the differences is given in the final field review document for this survey area, which is on file at the State office of the Natural Resources Conservation Service in Boise, Idaho.

Map Unit Descriptions

Soils on Mountains and Foothills and in Canyons

Number of map units: 8
Percentage of survey area: 68 percent

1. Ligget-Jughandle-Molly

Deep, well drained and somewhat excessively drained soils that formed in residuum derived from granite and in residuum derived from volcanic ash over granite

Percentage of survey area: 1 percent
Landform: Mountains
Elevation: 3,800 to 5,700 feet
Frost-free period: 30 to 80 days
Average annual precipitation: 28 to 40 inches
Major components: Ligget soils on south-facing side slopes, Jughandle soils on north-facing side slopes, and Molly soils on side slopes
Minor components: Bryan, Littlesalmon, Naz, Nazaton, Shellrock, and Suttler soils, Typic Xerofluvents, and Rock outcrop
Major uses: Woodland and wildlife habitat

2. Brody-Culdecole-Tamred

Moderately deep and deep, well drained soils that formed in residuum derived from basalt and in residuum derived from volcanic ash over basalt

Percentage of survey area: 1 percent
Landform: Mountains
Elevation: 4,000 to 5,300 feet
Frost-free period: 60 to 80 days
Average annual precipitation: 25 to 35 inches
Major components: Brody soils on side slopes and crests, Culdecole soils on side slopes and foot slopes, and Tamred soils on south-facing side slopes
Minor components: Klickson and Wapshilla soils, Typic Xerofluvents, and Rock outcrop
Major uses: Woodland and wildlife habitat

3. Bluebell-Ticanot-Demast

Shallow, moderately deep, and very deep, well drained soils that formed in colluvium and residuum derived from basalt

Percentage of survey area: 5 percent

Landform: Mountains
Elevation: 3,800 to 6,100 feet
Frost-free period: 65 to 80 days
Average annual precipitation: 22 to 26 inches
Major components: Bluebell soils on summits and side slopes; Ticanot soils on summits, shoulders, and side slopes; and Demast soils on side slopes
Minor components: Gestrin, Sudpeak, and Swede soils, and Rock outcrop
Major uses: Rangeland, woodland, and wildlife habitat

4. Riggins-Meland-Demasters

Shallow to deep, well drained soils that formed in colluvium and residuum derived from basalt

Percentage of survey area: 25 percent
Landform: Foothills and mountains
Elevation: 3,200 to 5,000 feet
Frost-free period: 105 to 130 days
Average annual precipitation: 16 to 22 inches
Major components: Riggins soils on summits, shoulders, and south-facing side slopes; Meland soils on summits, shoulders, and side slopes; and Demasters soils on north-facing side slopes (fig. 2)
Minor components: Demast, Jacknife, Johnson, Klicker, Moonstone, and Rockly soils, and Rock outcrop
Major uses: Rangeland, woodland, and wildlife habitat

5. Gem-Reywat-Bakeoven

Very shallow to moderately deep, well drained soils that formed in residuum derived from basalt

Percentage of survey area: 30 percent
Landform: Foothills and mountains
Elevation: 2,300 to 4,800 feet
Frost-free period: 110 to 140 days
Average annual precipitation: 12 to 16 inches
Major components: Gem soils on summits, shoulders, and side slopes; Reywat soils on crests, summits, and side slopes; and Bakeoven soils on summits, crests, side slopes, and shoulders (fig. 3)
Minor components: Agerdelly, Deshler, Gross, and Lorella soils, and Rock outcrop
Major uses: Rangeland and wildlife habitat

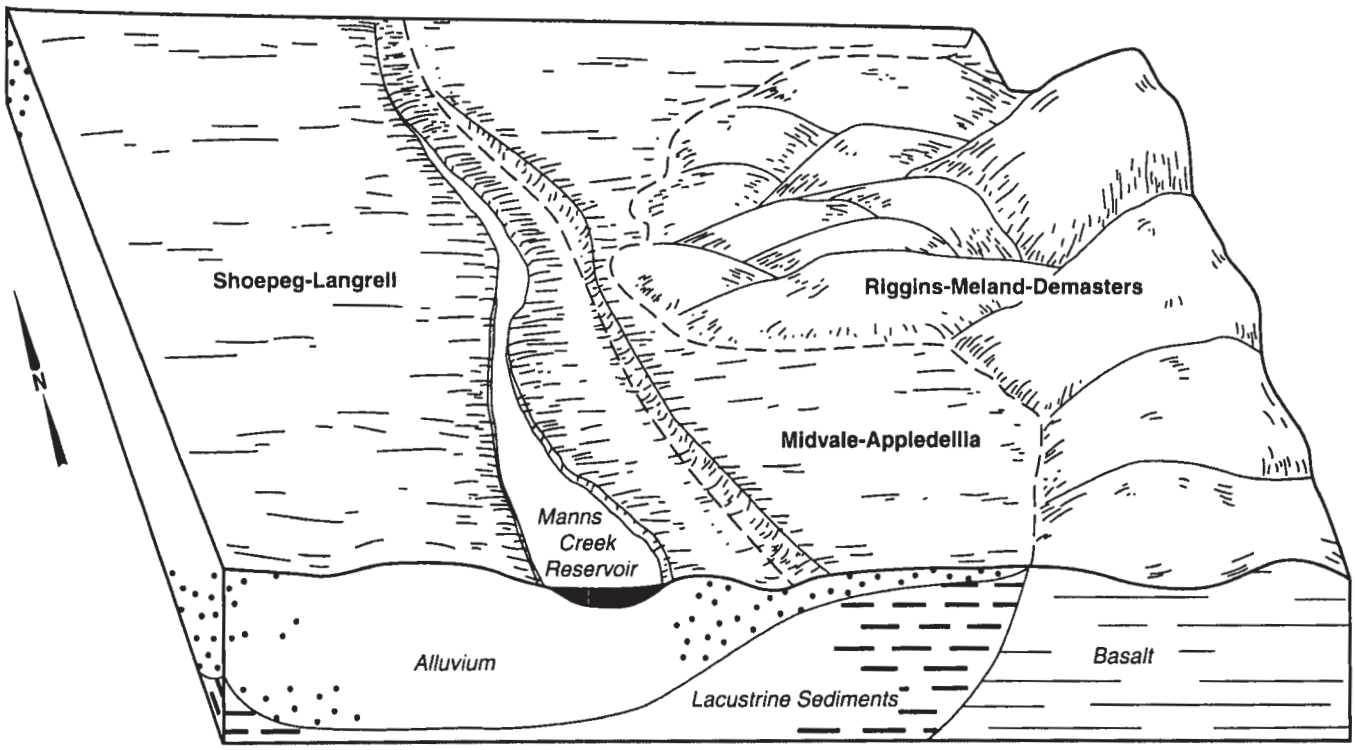

Figure 2.—Typical pattern of soils and underlying material in general soil map units 4, 13, and 14.

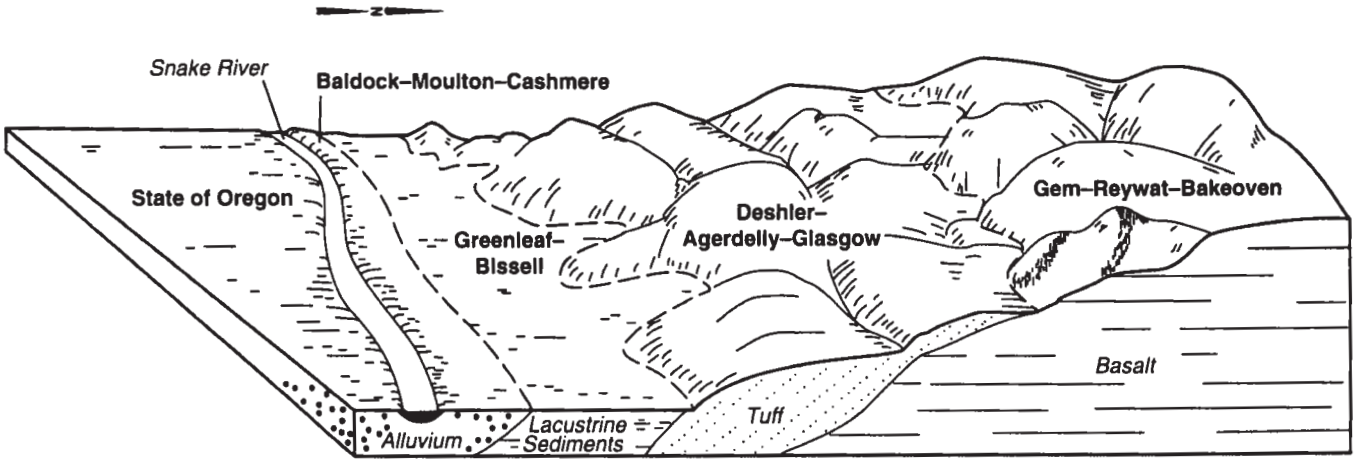

Figure 3.—Typical pattern of soils and underlying material in general soil map units 5, 10, 16, and 17.

6. Mulett-Mackey

Shallow and moderately deep, well drained soils that formed in residuum derived from basalt and rhyolite

Percentage of survey area: 1 percent
Landform: Foothills and mountains
Elevation: 2,000 to 3,500 feet
Frost-free period: 120 to 130 days
Average annual precipitation: 10 to 12 inches
Major components: Mulett soils on crests and south-facing side slopes and Mackey soils on south-facing side slopes
Minor components: Bakeoven, Gem, Gross, Oldsferry, and Reywat soils, Rock outcrop, and Duneland
Major uses: Rangeland and wildlife habitat

7. Gross-Oldsferry

Moderately deep, well drained soils that formed in residuum derived from basalt and shale

Percentage of survey area: 3 percent
Landform: Mountains and canyons
Elevation: 2,100 to 4,000 feet
Frost-free period: 120 to 145 days
Average annual precipitation: 12 to 18 inches
Major components: Gross and Oldsferry soils on north-facing side slopes
Minor components: Bakeoven, Gem, Gross, and Reywat soils, and Rock outcrop
Major uses: Rangeland and wildlife habitat

8. Rockly-McDaniel

Very shallow, shallow, and very deep, well drained soils that formed in loess, colluvium, and residuum derived from basalt

Percentage of survey area: 2 percent
Landform: Foothills, mountains, and canyons
Elevation: 1,800 to 4,500 feet
Frost-free period: 110 to 135 days
Average annual precipitation: 16 to 20 inches
Major components: Rockly soils on concave summits and south-facing side slopes and McDaniel soils on shoulders and west- and north-facing side slopes
Minor components: Gwin, Klicker, and Starveout soils, and Rock outcrop
Major uses: Rangeland and wildlife habitat

Soils on Foothills and Terraces

Number of map units: 3
Percentage of survey area: 19 percent

9. Deshler-Brownlee-Cranecreek

Moderately deep and very deep, well drained soils that formed in residuum derived from volcanic tuff and in alluvium derived from acid igneous rock and basalt

Percentage of survey area: 7 percent
Landform: Foothills and lacustrine terraces

Elevation: 2,500 to 4,500 feet
Frost-free period: 110 to 145 days
Average annual precipitation: 12 to 17 inches
Major components: Deshler and Brownlee soils on side slopes, summits, and foot slopes and Cranecreek soils on summits, side slopes, and shoulders
Minor components: Deterson, Devnot, and Reywat soils
Major uses: Cropland, rangeland, and wildlife habitat

10. Deshler-Agerdelly-Glasgow

Moderately deep and very deep, well drained soils that formed in residuum derived from volcanic tuff and siltstone

Percentage of survey area: 8 percent
Landform: Foothills and lacustrine terraces
Elevation: 2,100 to 3,500 feet
Frost-free period: 120 to 145 days
Average annual precipitation: 10 to 14 inches
Major components: Deshler soils on side slopes, summits and foot slopes; Agerdelly soils on summits and side slopes; and Glasgow soils on side slopes, summits, and shoulders (fig. 3)
Minor components: Bissell, Deterson, Devnot, Harpt, Haw, Lankbush, Lolalita, and Reywat soils
Major uses: Cropland, rangeland, and wildlife habitat

11. Haw-Lankbush-Payette

Very deep, well drained soils that formed in alluvium derived from mixed sources and in unconsolidated lacustrine sediment derived from granite

Percentage of survey area: 4 percent
Landform: Lacustrine terraces
Elevation: 2,200 to 3,500 feet
Frost-free period: 120 to 155 days
Average annual precipitation: 10 to 13 inches
Major components: Haw soils on side slopes, summits, and shoulders; Lankbush soils on side slopes, summits, and foot slopes; and Payette soils on south-facing side slopes and shoulders
Minor components: Chilcott, Dishner, Elijah, Lanktree, Lolalita, Saralegui, Van Dusen, and Vickery soils
Major uses: Cropland, rangeland, and wildlife habitat

Soils on Fans and Terraces

Number of map units: 6
Percentage of survey area: 13 percent

12. Swede-Blackwell-Melton

Very deep, well drained and poorly drained soils that formed in alluvium derived from basalt and granite and in alluvium over glacial outwash derived from granite

Percentage of survey area: 2 percent
Landform: Stream terraces, alluvial fans, and outwash terraces
Elevation: 3,800 to 4,900 feet
Frost-free period: 60 to 75 days
Average annual precipitation: 22 to 27 inches
Major components: Swede soils on summits and side slopes and Blackwell and Melton soils on fluvial bottoms
Minor components: Cabarton, Donnel, Gestrin, Kangas, and Roseberry soils
Major uses: Pastureland, hayland, and wildlife habitat

13. Midvale-Appledellia

Moderately deep and very deep, well drained soils that formed in alluvium over lacustrine sediment derived from mixed sources and in alluvium derived from basalt and granite

Percentage of survey area: 2 percent
Landform: Fan terraces
Elevation: 2,400 to 3,500 feet
Frost-free period: 110 to 145 days
Average annual precipitation: 16 to 25 inches
Major components: Midvale soils on summits, shoulders, and side slopes and Appledellia soils on summits and side slopes (fig. 2)
Minor components: Appleshall, Brownlee, Catherine, Demoss, Langrell, Odermott, and Shoepeg soils
Major uses: Cropland, rangeland, and wildlife habitat

14. Shoepeg-Langrell

Very deep, somewhat poorly drained and well drained soils that formed in alluvium derived from mixed sources

Percentage of survey area: 3 percent
Landform: Stream terraces
Elevation: 2,500 to 3,500 feet
Frost-free period: 110 to 150 days
Average annual precipitation: 14 to 22 inches
Major components: Shoepeg and Langrell soils on summits (fig. 2)
Minor components: Catherine and Dagor soils, and Riverwash

Major uses: Cropland, hayland, pastureland, and wildlife habitat

15. Newell-Langrell

Very deep, well drained soils that formed in alluvium derived from mixed sources

Percentage of survey area: 2 percent
Landform: Stream terraces and fan terraces
Elevation: 2,200 to 3,300 feet
Frost-free period: 120 to 160 days
Average annual precipitation: 12 to 16 inches
Major components: Newell and Langrell soils on summits
Minor components: Bissell, Dagor, Harpt, and Onyx soils, and Riverwash
Major uses: Cropland, hayland, pastureland, and wildlife habitat

16. Greenleaf-Bissell

Very deep, well drained soils that formed in lacustrine sediment and alluvium derived from mixed sources

Percentage of survey area: 2 percent
Landform: Terraces
Elevation: 2,100 to 2,500 feet
Frost-free period: 150 to 155 days
Average annual precipitation: 10 to 13 inches
Major components: Greenleaf and Bissell soils on summits (fig. 3)
Minor components: Jenny, Langrell, Lanktree, Nyssaton, Owyhee, Power, and Purdam soils
Major uses: Cropland, homesites, and wildlife habitat

17. Baldock-Moulton-Cashmere

Very deep, poorly drained, somewhat poorly drained, and well drained soils that formed in alluvium derived from mixed sources

Percentage of survey area: 2 percent
Landform: Stream terraces, fan terraces, and alluvial fans
Elevation: 2,100 to 2,500 feet
Frost-free period: 150 to 155 days
Average annual precipitation: 10 to 12 inches
Major components: Baldock soils on summits, Moulton soils on fluvial bottoms, and Cashmere soils on summits and fan terraces (fig. 3)
Minor components: Abo, Bissell, Clems, Falk, Jenny, Notus, Paniogue, Power, Purdam, and Tindahay soils, and Riverwash
Major uses: Cropland, homesites, and wildlife habitat

Detailed Soil Map Units

The map units delineated on the detailed maps at the back of this survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this section, along with the maps, can be used to determine the suitability and potential of a unit for specific uses. They also can be used to plan the management needed for those uses. More information about each map unit is given under the heading "Use and Management of the Soils."

A map unit delineation on a map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils or miscellaneous areas. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils and miscellaneous areas are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some "included" areas that belong to other taxonomic classes.

Most included soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, inclusions. They may or may not be mentioned in the map unit description. Other included soils and miscellaneous areas, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, inclusions. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. The included areas of contrasting soils or miscellaneous areas are mentioned in the map unit descriptions. A few included areas may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of included areas in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans, but if intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives the principal hazards and limitations to be considered in planning for specific uses.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Haw silt loam, 4 to 8 percent slopes, is a phase of the Haw series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes or associations.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Agerdelly-Devnot complex, 4 to 30 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Jughandle-Suttler association, 40 to 90 percent slopes, is an example.

Table 4 gives the acreage and proportionate extent of each map unit. Other tables (see "Contents") give properties of the soils and the limitations, capabilities, and potentials for many uses. The Glossary defines many of the terms used in describing the soils or miscellaneous areas.

In the map unit descriptions that follow, a semitabular format is used. In this format a boldface heading (for example, **Composition**) is used to identify the kind of information grouped directly below it. Introducing each item of information under the heading is an italicized term or phrase (for example, *Position on landscape:*) that identifies or describes the information. Many of the boldface headings and introductory terms or phrases are self-explanatory; however, some of them need further explanation. These explanations are provided in the following paragraphs, generally in the order in which they are used in the map unit descriptions.

Composition is given for the components identified in the name of the map unit as well as for the contrasting inclusions.

Inclusions are areas of components (soils or miscellaneous areas) that differ from the components for which the unit is named. Inclusions can be either similar or contrasting. *Similar inclusions* are components that differ from the components for which the unit is named but that for purposes of use and management can be considered to be the same as the named components. Note that in the "Composition" paragraph a single percentage is provided for a named soil and the similar inclusions because their use and management are similar.

Contrasting inclusions are components that differ sufficiently from the components for which the unit is named that they would have different use and management if they were extensive enough to be managed separately. For most uses, contrasting inclusions have limited effect on use and management. Inclusions generally are in small areas, and they could not be mapped separately because of the scale used. Some small areas of strongly contrasting inclusions are identified by a special symbol on the detailed soil maps. A few inclusions may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the inclusions on the landscape.

Landform refers to the dominant three-dimensional part or parts of the land surface on which the component is located. In naming landforms, an effort has been made to name the specific landform on which the component occurs. In some instances, however, the component may occur on more than one landform.

Position on landscape refers to the dominant position or positions on which the component is located. In naming landscape positions, an effort has been made to give the specific position of the component rather than a general position that could encompass other components. In some instances, however, the component is distributed over a larger landscape to such a degree that it is more nearly accurate to name the larger landscape positions rather than the local ones.

Typical profile is a vertical, two-dimensional section of the soil extending from the surface to a restrictive layer or to a depth of 60 inches or more.

Depth class is an adjective term (for example, moderately deep) for the depth of the soil.

Permeability is the quality of the soil that enables water to move downward through the profile. Permeability is measured as the number of inches per hour that water moves downward through the saturated soil.

Available water capacity is the capacity of the soil to hold water available for use by most plants. It commonly is expressed as inches of water per inch of soil (see "Glossary").

Hazard of erosion by water refers to the hazard if protective plant cover is removed. The hazard of erosion is constant and cannot be increased or reduced.

Major uses are the dominant uses at the time the major part of the fieldwork for this survey was completed.

Major management factors are those factors that affect the use of the soils for the major uses. The major management factors may apply to the entire unit or to a given component of the unit.

Soil Descriptions

1—Abo silt loam, 0 to 2 percent slopes

Composition

Abo soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Stream terraces
Elevation: 2,100 to 2,200 feet

Characteristics of the Abo Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—48 to 50 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 4 inches—light brownish gray silt loam
4 to 11 inches—light brownish gray silty clay loam
11 to 60 inches—very pale brown silt loam
Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderately slow
Available water capacity: High
Restriction to rooting depth: Water table at a depth of 36 to 60 inches
Runoff: Slow
Hazard of erosion by water: Slight
Depth to water table: 36 to 60 inches in May through September

Contrasting Inclusions

- Baldock silt loam
- Greenleaf silt loam
- Moulton fine sandy loam
- Soils that are saline

Use and Management

Major use: Irrigated cropland
Major management factor: Wetness

Interpretive Groups

Capability classification: IIw, irrigated

2—Agerdelly clay, 4 to 30 percent slopes

Composition

Agerdelly soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Foothills and lacustrine terraces
Elevation: 2,100 to 3,000 feet

Characteristics of the Agerdelly Soil

Position on landscape: Summits and side slopes
Climatic data (average annual):
Precipitation—12 to 14 inches
Air temperature—50 to 52 degrees F
Length of growing season—135 to 145 days
Typical profile:
0 to 60 inches—light brownish gray clay
Depth class: Very deep
Drainage class: Well drained
Permeability: Very slow
Available water capacity: High
Runoff: Medium or rapid
Hazard of erosion by water: Moderate or severe
Shrink-swell potential: High

Contrasting Inclusions

- Glasgow clay loam
- Deshler silty clay loam
- Soils that are 10 to 20 inches deep to tuff

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, heavy clay layer, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and xeric big sagebrush

Interpretive Groups

Capability classification: IVe, nonirrigated
Range site: Churning clay, 11- to 16-inch precipitation zone

3—Agerdelly clay, 30 to 60 percent slopes

Composition

Agerdelly soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Foothills and dissected lacustrine terraces
Elevation: 2,100 to 3,000 feet

Characteristics of the Agerdelly Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—12 to 14 inches
Air temperature—50 to 52 degrees F
Length of growing season—135 to 145 days
Typical profile:
0 to 60 inches—light brownish gray clay
Depth class: Very deep
Drainage class: Well drained
Permeability: Very slow
Available water capacity: High
Runoff: Very rapid
Hazard of erosion by water: Severe
Shrink-swell potential: High

Contrasting Inclusions

- Glasgow clay loam
- Deshler silty clay loam
- Deterson silt loam
- Soils that are 10 to 20 inches deep to tuff

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, heavy clay layer, slope, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and xeric big sagebrush

Interpretive Groups

Capability classification: VIIe, nonirrigated
Range site: Churning clay, 11- to 16-inch precipitation zone

4—Agerdelly-Devnot complex, 4 to 30 percent slopes

Composition

Agerdelly soil and similar inclusions—60 percent
Devnot soil and similar inclusions—30 percent
Contrasting inclusions—10 percent

Setting

Landform: Foothills
Elevation: 2,300 to 3,000 feet

Characteristics of the Agerdelly Soil

Position on landscape: Summits and side slopes
Climatic data (average annual):
Precipitation—12 to 14 inches
Air temperature—46 to 50 degrees F
Length of growing season—130 to 140 days
Typical profile:
0 to 60 inches—light brownish gray clay
Depth class: Very deep
Drainage class: Well drained
Permeability: Very slow
Available water capacity: High
Runoff: Medium or rapid
Hazard of erosion by water: Moderate or severe

Characteristics of the Devnot Soil

Position on landscape: Summits and side slopes
Climatic data (average annual):
Precipitation—12 to 14 inches
Air temperature—46 to 50 degrees F
Length of growing season—130 to 140 days
Typical profile:
0 to 4 inches—grayish brown very stony clay loam
4 to 19 inches—dark grayish brown stony clay
19 inches—sandstone or conglomerate
Depth class: Shallow
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low
Restriction to rooting depth: Bedrock at a depth of 10 to 20 inches
Runoff: Medium or rapid
Hazard of erosion by water: Moderate or severe

Contrasting Inclusions

- Deshler silty clay loam
- Glasgow clay loam

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, heavy clay layer, stones on the surface, depth to bedrock, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Agerdelly soil—bluebunch wheatgrass and xeric big sagebrush; Devnot soil—Sandberg bluegrass and stiff sagebrush

Interpretive Groups

Capability classification: VIs, nonirrigated
Range site: Agerdelly soil—Churning Clay, 11- to 16-inch precipitation zone; Devnot soil—Very Shallow, 12- to 20-inch precipitation zone

5—Agerdelly-Devnot complex, 30 to 60 percent slopes

Composition

Agerdelly soil and similar inclusions—75 percent
Devnot soil and similar inclusions—15 percent
Contrasting inclusions—10 percent

Setting

Landform: Foothills
Elevation: 2,500 to 4,500 feet

Characteristics of the Agerdelly Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—12 to 14 inches
Air temperature—46 to 50 degrees F
Length of growing season—130 to 140 days
Slope range: 30 to 60 percent
Typical profile:
0 to 60 inches—light brownish gray clay
Depth class: Very deep
Drainage class: Well drained
Permeability: Very slow
Available water capacity: High
Runoff: Very rapid
Hazard of erosion by water: Severe

Characteristics of the Devnot Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—12 to 14 inches
Air temperature—46 to 50 degrees F
Length of growing season—130 to 140 days
Slope range: 30 to 50 percent
Typical profile:
0 to 4 inches—grayish brown very stony clay loam
4 to 19 inches—dark grayish brown stony clay
19 inches—sandstone
Depth class: Shallow
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low
Restriction to rooting depth: Bedrock at a depth of 10 to 20 inches
Runoff: Very rapid
Hazard of erosion by water: Very severe

Contrasting Inclusions

- Glasgow clay loam
- Deshler silty clay loam

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, slope, heavy clay layer, stones on the surface, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Agerdelly soil—bluebunch wheatgrass and xeric big sagebrush; Devnot soil—Sandberg bluegrass and stiff sagebrush

Interpretive Groups

Capability classification: VIIe, nonirrigated
Range site: Agerdelly soil—Churning Clay, 11- to 16-inch precipitation zone; Devnot soil—Very Shallow, 12- to 20-inch precipitation zone

6—Appledellia loam, 2 to 4 percent slopes

Composition

Appledellia soil and similar inclusions—85 percent
Contrasting inclusions—15 percent

Setting

Landform: Fan terraces
Elevation: 2,500 to 3,500 feet

Characteristics of the Appledellia Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—16 to 25 inches
Air temperature—48 to 52 degrees F
Length of growing season—110 to 130 days
Typical profile:
0 to 10 inches—brown loam
10 to 18 inches—reddish brown clay
18 to 32 inches—reddish brown gravelly clay
32 to 33 inches—hardpan
33 to 60 inches—multicolored extremely gravelly sand
Depth class: Moderately deep to a hardpan
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low

Restriction to rooting depth: Hardpan at a depth of 20 to 40 inches
Runoff: Slow
Hazard of erosion by water: Slight

Contrasting Inclusions

- Appleshall gravelly clay loam
- Midvale silty clay loam
- Soils that have slopes of less than 2 percent or more than 4 percent
- Soils that are more than 35 percent pebbles
- Soils that are less than 10 inches deep to a hardpan

Use and Management

Major uses: Hayland and pastureland
Major management factor: Heavy clay layer

Interpretive Groups

Capability classification: IVs, nonirrigated

7—Appledellia loam, 4 to 8 percent slopes

Composition

Appledellia soil and similar inclusions—85 percent
Contrasting inclusions—15 percent

Setting

Landform: Alluvial terraces
Elevation: 2,500 to 3,500 feet

Characteristics of the Appledellia Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—16 to 25 inches
Air temperature—48 to 52 degrees F
Length of growing season—110 to 130 days
Typical profile:
0 to 10 inches—brown loam
10 to 18 inches—reddish brown clay
18 to 32 inches—reddish brown gravelly clay
32 to 33 inches—hardpan
33 to 60 inches—multicolored extremely gravelly sand
Depth class: Moderately deep to a hardpan
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low
Restriction to rooting depth: Hardpan at a depth of 20 to 40 inches
Runoff: Medium
Hazard of erosion by water: Slight or moderate

Contrasting Inclusions

- Appleshall gravelly clay loam
- Midvale silty clay loam
- Soils that have slopes of less than 4 percent or more than 8 percent
- Soils that are more than 35 percent pebbles
- Soils that are less than 10 inches deep to a hardpan

Use and Management

Major uses: Hayland and pastureland
Major management factors: Heavy clay layer and hazard of water erosion

Interpretive Groups

Capability classification: IVe, nonirrigated

8—Appledellia clay loam, 12 to 30 percent slopes

Composition

Appledellia soil and similar inclusions—85 percent
Contrasting inclusions—15 percent

Setting

Landform: Fan terraces
Elevation: 2,500 to 3,500 feet

Characteristics of the Appledellia Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—16 to 25 inches
Air temperature—48 to 52 degrees F
Length of growing season—110 to 130 days
Typical profile:
0 to 10 inches—brown clay loam
10 to 18 inches—reddish brown clay
18 to 32 inches—reddish brown gravelly clay
32 to 33 inches—hardpan
33 to 60 inches—multicolored extremely gravelly sand
Depth class: Moderately deep to a hardpan
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low
Restriction to rooting depth: Hardpan at a depth of 20 to 40 inches
Runoff: Medium or rapid
Hazard of erosion by water: Moderate or severe

Contrasting Inclusions

- Appleshall gravelly clay loam
- Bakeoven extremely stony loam
- Deshler silty clay loam
- Langrell gravelly loam

Use and Management

Major uses: Rangeland, hayland, and pastureland
Major management factors: Slope, heavy clay layer, and hazard of water erosion
Dominant vegetation in potential plant community: Idaho fescue and antelope bitterbrush

Interpretive Groups

Capability classification: VIe, nonirrigated
Range site: Loamy, 16- to 20-inch precipitation zone

9—Appledellia-Appleshall complex, 2 to 15 percent slopes

Composition

Appledellia soil and similar inclusions—60 percent
Appleshall soil and similar inclusions—30 percent
Contrasting inclusions—10 percent

Setting

Landform: Fan terraces
Elevation: 2,600 to 3,500 feet

Characteristics of the Appledellia Soil

Position on landscape: Convex summits and side slopes
Climatic data (average annual):
Precipitation—16 to 20 inches
Air temperature—48 to 52 degrees F
Length of growing season—110 to 130 days
Slope range: 2 to 15 percent
Typical profile:
0 to 10 inches—brown loam
10 to 18 inches—reddish brown clay
18 to 32 inches—reddish brown gravelly clay
32 to 33 inches—hardpan
33 to 60 inches—multicolored extremely gravelly sand
Depth class: Moderately deep to a hardpan
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low
Restriction to rooting depth: Hardpan at a depth of 20 to 40 inches
Runoff: Medium
Hazard of erosion by water: Slight or moderate

Characteristics of the Appleshall Soil

Position on landscape: Concave side slopes and foot slopes
Climatic data (average annual):
Precipitation—16 to 20 inches
Air temperature—48 to 52 degrees F
Length of growing season—110 to 130 days
Slope range: 2 to 10 percent
Typical profile:
0 to 6 inches—grayish brown gravelly clay loam
6 to 12 inches—grayish brown very gravelly clay loam
12 to 13 inches—hardpan
13 to 60 inches—multicolored extremely gravelly sand
Depth class: Shallow to a hardpan
Drainage class: Well drained
Permeability: Slow
Available water capacity: Very low
Restriction to rooting depth: Hardpan at a depth of 10 to 20 inches
Runoff: Medium
Hazard of erosion by water: Slight or moderate

Contrasting Inclusions

- Midvale silty clay loam
- Soils that are less than 10 inches deep to a hardpan
- Soils that have slopes of less than 2 percent or more than 15 percent

Use and Management

Major use: Rangeland
Major management factors: Heavy clay layer, depth to hardpan, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Appledellia soil—Idaho fescue and antelope bitterbrush; Appleshall soil—Sandberg bluegrass and stiff sagebrush

Interpretive Groups

Capability classification: IVe, nonirrigated
Range site: Appledellia soil—Loamy, 16- to 20-inch precipitation zone; Appleshall soil—Very Shallow, 12- to 20-inch precipitation zone

10—Appledellia-Appleshall complex, moist, 2 to 15 percent slopes

Composition

Appledellia soil and similar inclusions—60 percent

Appleshall soil and similar inclusions—30 percent
Contrasting inclusions—10 percent

Setting

Landform: Fan terraces
Elevation: 2,600 to 3,500 feet

Characteristics of the Appledellia Soil

Position on landscape: Convex summits and side slopes
Climatic data (average annual):
Precipitation—20 to 25 inches
Air temperature—48 to 50 degrees F
Length of growing season—110 to 120 days
Slope range: 2 to 15 percent
Typical profile:
0 to 10 inches—brown loam
10 to 18 inches—reddish brown clay
18 to 32 inches—reddish brown gravelly clay
32 to 33 inches—hardpan
33 to 60 inches—multicolored extremely gravelly sand
Depth class: Moderately deep to a hardpan
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low
Restriction to rooting depth: Hardpan at a depth of 20 to 40 inches
Runoff: Medium
Hazard of erosion by water: Slight or moderate

Characteristics of the Appleshall Soil

Position on landscape: Concave side slopes and foot slopes
Climatic data (average annual):
Precipitation—20 to 25 inches
Air temperature—48 to 50 degrees F
Length of growing season—110 to 120 days
Slope range: 2 to 10 percent
Typical profile:
0 to 6 inches—grayish brown gravelly clay loam
6 to 12 inches—grayish brown very gravelly clay loam
12 to 13 inches—hardpan
13 to 60 inches—multicolored extremely gravelly sand
Depth class: Shallow to a hardpan
Drainage class: Well drained
Permeability: Slow
Available water capacity: Very low
Restriction to rooting depth: Hardpan at a depth of 10 to 20 inches
Runoff: Medium
Hazard of erosion by water: Slight or moderate

Contrasting Inclusions

- Midvale silty clay loam
- Soils that are less than 10 inches deep to a hardpan
- Soils that have slopes of less than 2 percent or more than 15 percent

Use and Management

Major use: Rangeland
Major management factors: Heavy clay layer, depth to hardpan, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Appledellia soil—Idaho fescue and bluebunch wheatgrass; Appleshall soil—Sandberg bluegrass and stiff sagebrush

Interpretive Groups

Capability classification: VIe, nonirrigated
Range site: Appledellia soil—Loamy, 22+-inch precipitation zone; Appleshall soil—Very Shallow, 12- to 20-inch precipitation zone

11—Appledellia-Odermott complex, 2 to 4 percent slopes

Composition

Appledellia soil and similar inclusions—75 percent
Odermott soil and similar inclusions—20 percent
Contrasting inclusions—5 percent

Setting

Landform: Fan terraces
Elevation: 3,000 to 3,500 feet

Characteristics of the Appledellia Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—20 to 23 inches
Air temperature—48 to 50 degrees F
Length of growing season—110 to 120 days
Typical profile:
0 to 10 inches—brown clay loam
10 to 18 inches—reddish brown clay
18 to 32 inches—reddish brown gravelly clay
32 to 33 inches—hardpan
33 to 60 inches—multicolored extremely gravelly sand
Depth class: Moderately deep to a hardpan
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low

Restriction to rooting depth: Hardpan at a depth of 20 to 40 inches
Runoff: Slow
Hazard of erosion by water: Slight

Characteristics of the Odermott Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—20 to 23 inches
Air temperature—48 to 50 degrees F
Length of growing season—110 to 120 days
Typical profile:
0 to 15 inches—brown clay loam
15 to 26 inches—reddish brown clay
26 to 34 inches—yellowish red clay
34 to 60 inches—olive brown and light yellowish brown, stratified pebbles, cobbles, and sand
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow in the upper part and very rapid below
Available water capacity: Moderate
Runoff: Slow
Hazard of erosion by water: Slight

Contrasting Inclusions

- Jacknife loam

Use and Management

Major uses: Hayland and pastureland
Major management factor: Heavy clay layer

Interpretive Groups

Capability classification: IVs, nonirrigated

12—Appledellia-Odermott complex, 4 to 8 percent slopes

Composition

Appledellia soil and similar inclusions—70 percent
Odermott soil and similar inclusions—25 percent
Contrasting inclusions—5 percent

Setting

Landform: Fan terraces
Elevation: 3,000 to 3,500 feet

Characteristics of the Appledellia Soil

Position on landscape: Summits and side slopes
Climatic data (average annual):
Precipitation—20 to 23 inches
Air temperature—48 to 50 degrees F
Length of growing season—110 to 120 days
Typical profile:
0 to 10 inches—brown clay loam
10 to 18 inches—reddish brown clay
18 to 32 inches—reddish brown gravelly clay
32 to 33 inches—hardpan
33 to 60 inches—multicolored extremely gravelly sand
Depth class: Moderately deep to a hardpan
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low
Restriction to rooting depth: Hardpan at a depth of 20 to 40 inches
Runoff: Medium
Hazard of erosion by water: Slight

Characteristics of the Odermott Soil

Position on landscape: Summits and side slopes
Climatic data (average annual):
Precipitation—20 to 23 inches
Air temperature—48 to 50 degrees F
Length of growing season—110 to 120 days
Typical profile:
0 to 15 inches—brown clay loam
15 to 26 inches—reddish brown clay
26 to 34 inches—yellowish red clay
34 to 60 inches—olive brown and light yellowish brown, stratified pebbles, cobbles, and sand
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow in the upper part and very rapid below
Available water capacity: Moderate
Runoff: Medium
Hazard of erosion by water: Slight

Contrasting Inclusions

- Jacknife loam

Use and Management

Major uses: Hayland and pastureland
Major management factor: Heavy clay layer

Interpretive Groups

Capability classification: IVe, nonirrigated

13—Bakeoven-Reywat complex, 2 to 30 percent slopes

Composition

Bakeoven soil and similar inclusions—60 percent
Reywat soil and similar inclusions—35 percent
Contrasting inclusions—5 percent

Setting

Landform: Foothills and mountains
Elevation: 2,300 to 3,600 feet

Characteristics of the Bakeoven Soil

Position on landscape: Summits and side slopes
Climatic data (average annual):
Precipitation—12 to 14 inches
Air temperature—47 to 51 degrees F
Length of growing season—110 to 130 days
Typical profile:
0 to 3 inches—grayish brown extremely stony loam
3 to 5 inches—brown very cobbly loam
5 to 9 inches—brown very gravelly clay loam
9 inches—basalt
Depth class: Very shallow
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Very low
Restriction to rooting depth: Bedrock at a depth of 4 to 10 inches
Runoff: Medium or rapid
Hazard of erosion by water: Moderate or severe

Characteristics of the Reywat Soil

Position on landscape: Summits and side slopes
Climatic data (average annual):
Precipitation—12 to 14 inches
Air temperature—47 to 51 degrees F
Length of growing season—110 to 130 days
Typical profile:
0 to 6 inches—grayish brown very stony loam
6 to 19 inches—brown very gravelly clay loam
19 inches—basalt
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Very low
Restriction to rooting depth: Bedrock at a depth of 10 to 20 inches
Runoff: Medium or rapid
Hazard of erosion by water: Moderate or severe

Contrasting Inclusions

- Gem extremely stony clay loam
- Devnot very stony clay loam
- Rock outcrop

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, stones on the surface, depth to bedrock, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Bakeoven soil—Sandberg bluegrass and stiff sagebrush; Reywat soil—bluebunch wheatgrass and xeric big sagebrush

Interpretive Groups

Capability classification: VIIs, nonirrigated
Range site: Bakeoven soil—Very Shallow, 12- to 20-inch precipitation zone; Reywat soil—Shallow Stony Loam, 12- to 16-inch precipitation zone

14—Bakeoven-Reywat-Rock outcrop complex, 30 to 60 percent slopes

Composition

Bakeoven soil and similar inclusions—45 percent
Reywat soil and similar inclusions—35 percent
Rock outcrop—15 percent
Contrasting inclusions—5 percent

Setting

Landform: Foothills and mountains
Elevation: 2,300 to 3,600 feet

Characteristics of the Bakeoven Soil

Position on landscape: Side slopes and crests
Climatic data (average annual):
Precipitation—12 to 14 inches
Air temperature—47 to 51 degrees F
Length of growing season—110 to 130 days
Typical profile:
0 to 3 inches—grayish brown extremely stony loam
3 to 5 inches—brown very cobbly loam
5 to 9 inches—brown very gravelly clay loam
9 inches—basalt
Depth class: Very shallow
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Very low
Restriction to rooting depth: Bedrock at a depth of 4 to 10 inches
Runoff: Very rapid
Hazard of erosion by water: Very severe

Characteristics of the Reywat Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—12 to 14 inches
Air temperature—47 to 51 degrees F
Length of growing season—110 to 130 days
Typical profile:
0 to 6 inches—grayish brown very stony loam

6 to 19 inches—brown very gravelly clay loam
19 inches—basalt
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Very low
Restriction to rooting depth: Bedrock at a depth of 10 to 20 inches
Runoff: Very rapid
Hazard of erosion by water: Very severe

Characteristics of the Rock Outcrop

Position on landscape: Crests
Kind of rock: Exposed, hard basalt
Vegetation: None, except in fractures

Contrasting Inclusions

- Gem extremely stony clay loam
- Devnot very stony clay loam

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, slope, stones on the surface, depth to bedrock, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Bakeoven soil—Sandberg bluegrass and stiff sagebrush; Reywat soil—bluebunch wheatgrass and xeric big sagebrush

Interpretive Groups

Capability classification: VIIs, nonirrigated
Range site: Bakeoven soil—Very Shallow, 12- to 20-inch precipitation zone; Reywat soil—Shallow South Stony, 12- to 16-inch precipitation zone

15—Baldock silt loam, 0 to 2 percent slopes

Composition

Baldock soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Stream terraces
Elevation: 2,100 to 2,300 feet

Characteristics of the Baldock Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—48 to 52 inches
Length of growing season—150 to 155 days
Typical profile:
0 to 15 inches—gray silt loam
15 to 28 inches—grayish brown silt loam
28 to 38 inches—light brownish gray silt loam
38 to 60 inches—light brownish gray sandy loam
Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderate
Available water capacity: High
Restriction to rooting depth: Water table at a depth of 24 to 36 inches
Runoff: Slow
Hazard of erosion by water: Slight
Depth to water table: 24 to 36 inches in August through November
Frequency of flooding: Rare in most areas, but occasional in areas adjacent to the Snake and Weiser Rivers
Salinity: Slight

Contrasting Inclusions

- Falk fine sandy loam
- Moulton fine sandy loan
- Soils that are strongly sodic

Use and Management

Major use: Irrigated cropland
Major management factors: Wetness and salinity

Interpretive Groups

Capability classification: IIIw, irrigated

16—Baldock clay loam, 0 to 2 percent slopes

Composition

Baldock soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Alluvial fans and stream terraces
Elevation: 2,100 to 2,300 feet

Characteristics of the Baldock Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—48 to 52 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 15 inches—gray clay loam
15 to 28 inches—grayish brown silt loam
28 to 38 inches—light brownish gray silt loam

38 to 60 inches—light brownish gray sandy loam
Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderate
Available water capacity: High
Restriction to rooting depth: Water table at a depth of 24 to 36 inches
Runoff: Slow
Hazard of erosion by water: Slight
Depth to water table: 24 to 36 inches in August through November
Frequency of flooding: Rare in most areas, but occasional in areas adjacent to the Snake and Weiser Rivers
Salinity: Slight

Contrasting Inclusions

- Falk fine sandy loam
- Moulton fine sandy loam that is strongly sodic
- Soils that do not have calcium carbonates and are 30 to 40 inches deep to a weak hardpan

Use and Management

Major use: Irrigated cropland
Major management factors: Wetness and salinity

Interpretive Groups

Capability classification: IIIw, irrigated

17—Bissell loam, 0 to 2 percent slopes

Composition

Bissell soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Fan terraces
Elevation: 2,100 to 2,500 feet

Characteristics of the Bissell Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 13 inches
Air temperature—48 to 50 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 9 inches—brown loam
9 to 20 inches—brown clay loam
20 to 48 inches—pale brown clay loam
48 to 55 inches—pale brown loam
55 to 60 inches—light brownish gray very gravelly loamy coarse sand
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: High
Runoff: Slow
Hazard of erosion by water: Slight

Contrasting Inclusions

- Agerdelly clay
- Power silt loam
- Purdam silt loam
- Soils that are wet in the lower part

Use and Management

Major use: Irrigated cropland
Major management factors: None

Interpretive Groups

Capability classification: I, irrigated

18—Bissell loam, 2 to 4 percent slopes

Composition

Bissell soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Fan terraces
Elevation: 2,100 to 2,500 feet

Characteristics of the Bissell Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 13 inches
Air temperature—48 to 50 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 9 inches—brown loam
9 to 20 inches—brown clay loam
20 to 48 inches—pale brown clay loam
48 to 55 inches—pale brown loam
55 to 60 inches—light brownish gray very gravelly loamy coarse sand
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: High
Runoff: Slow
Hazard of erosion by water: Slight

Contrasting Inclusions

- Agerdelly clay
- Power silt loam

- Purdam silt loam
- Harpt loam
- Newell clay loam
- Soils that have slopes of more than 4 percent

Use and Management

Major use: Irrigated cropland
Major management factors: None

Interpretive Groups

Capability classification: IIe, irrigated

19—Blackwell clay loam, 0 to 5 percent slopes

Composition

Blackwell soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Stream terraces
Elevation: 3,800 to 4,900 feet

Characteristics of the Blackwell Soil

Position on landscape: Fluvial bottoms
Climatic data (average annual):
Precipitation—22 to 25 inches
Air temperature—39 to 42 degrees F
Length of growing season—60 to 70 days
Typical profile:
0 to 10 inches—dark gray clay loam
10 to 20 inches—dark grayish brown clay loam
20 to 29 inches—gray silt loam
29 to 38 inches—gray clay loam
38 to 60 inches—grayish brown, stratified gravelly sand and sandy clay loam
Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderately slow
Available water capacity: Moderate
Restriction to rooting depth: Water table at a depth of 2 to 30 inches
Runoff: Slow
Hazard of erosion by water: Slight
Depth to water table: 2 to 30 inches in March through July
Frequency of flooding: Frequent

Contrasting Inclusions

- Cabarton silty clay loam
- Melton loam

Use and Management

Major use: Hayland and pastureland
Major management factors: Short growing season, hazard of flooding, and wetness

Interpretive Groups

Capability classification: Vw, nonirrigated
Range site: Wet Meadow

20—Bluebell cobbly loam, 5 to 35 percent slopes

Composition

Bluebell soil and similar inclusions—85 percent
Contrasting inclusions—15 percent

Setting

Landform: Mountains
Elevation: 4,100 to 6,100 feet

Characteristics of the Bluebell Soil

Position on landscape: Summits and side slopes
Climatic data (average annual):
Precipitation—22 to 26 inches
Air temperature—39 to 42 degrees F
Length of growing season—65 to 75 days
Typical profile:
1 inch to 0—partially decomposed organic matter
0 to 10 inches—dark grayish brown cobbly loam
10 to 18 inches—dark grayish brown very gravelly clay loam
18 to 24 inches—brown very gravelly clay loam
24 inches—basalt
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Very low
Restriction to rooting depth: Bedrock at a depth of 20 to 40 inches
Runoff: Medium or rapid
Hazard of erosion by water: Moderate or severe

Contrasting Inclusions

- Ticanot very cobbly loam
- Demast loam

Use and Management

Major use: Woodland
Major management factors: Available water capacity and hazard of water erosion
Dominant vegetation in potential plant community:

Ponderosa pine, bluebunch wheatgrass, Idaho fescue, elk sedge, arrowleaf balsamroot, mountain big sagebrush, and common snowberry
Mean site index for stated species: Ponderosa pine—80
Estimated average annual production per acre: Ponderosa pine—2,750 cubic feet of timber 0.6 inch in diameter or more at 40 years of age

Interpretive Groups

Capability classification: VIe, nonirrigated

21—Bluebell cobbly loam, 35 to 65 percent slopes

Composition

Bluebell soil and similar inclusions—80 percent
Contrasting inclusions—20 percent

Setting

Landform: Mountains
Elevation: 4,100 to 6,100 feet

Characteristics of the Bluebell Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—22 to 26 inches
Air temperature—39 to 42 degrees F
Length of growing season—65 to 75 days
Typical profile:
1 inch to 0—partially decomposed organic matter
0 to 10 inches—dark grayish brown cobbly loam
10 to 18 inches—dark grayish brown very gravelly clay loam
18 to 24 inches—brown very gravelly clay loam
24 inches—basalt
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Very low
Restriction to rooting depth: Bedrock at a depth of 20 to 40 inches
Runoff: Very rapid
Hazard of erosion by water: Very severe

Contrasting Inclusions

- Ticanot very cobbly loam
- Demast loam
- Soils that are more than 35 percent stones and cobbles and are 40 to 60 inches deep to bedrock
- Soils that are light colored and ashy

Use and Management

Major use: Woodland
Major management factors: Slope, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Ponderosa pine, bluebunch wheatgrass, Idaho fescue, elk sedge, arrowleaf balsamroot, mountain big sagebrush, and common snowberry
Mean site index for stated species: Ponderosa pine—80
Estimated average annual production per acre: Ponderosa pine—2,750 cubic feet of timber 0.6 inch in diameter or more at 40 years of age

Interpretive Groups

Capability classification: VIIe, nonirrigated

22—Bluesprin family, 30 to 60 percent slopes

Composition

Bluesprin family and similar inclusions—85 percent
Contrasting inclusions—15 percent

Setting

Landform: Mountains
Elevation: 3,500 to 3,800 feet

Characteristics of the Bluesprin Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—23 to 25 inches
Air temperature—46 to 48 degrees F
Length of growing season—115 to 125 days
Sample profile:
0 to 4 inches—grayish brown extremely stony loam
4 to 12 inches—brown coarse sandy loam
12 to 16 inches—brown very gravelly clay loam
16 to 23 inches—brown very gravelly sandy loam
23 inches—granite
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Low
Restriction to rooting depth: Bedrock at a depth of 20 to 40 inches
Runoff: Very rapid
Hazard of erosion by water: Severe or very severe

Contrasting Inclusions

- Johnson coarse sandy loam
- Soils that are 10 to 20 inches deep to bedrock
- Rock outcrop

Use and Management

Major use: Rangeland
Major management factors: Slope, stones on the surface, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and xeric big sagebrush

Interpretive Groups

Capability classification: VIIs, nonirrigated
Range site: South Slope Loamy, 16- to 22-inch precipitation zone

23—Brody-Culdecole complex, 30 to 65 percent slopes

Composition

Brody soil and similar inclusions—60 percent
Culdecole soil and similar inclusions—30 percent
Contrasting inclusions—10 percent

Setting

Landform: Mountains
Elevation: 4,000 to 5,200 feet

Characteristics of the Brody Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—30 to 34 inches
Air temperature—38 to 42 degrees F
Length of growing season—60 to 80 days
Slope range: 30 to 65 percent
Typical profile:
3 inches to 0—partially decomposed organic matter
0 to 14 inches—brown loam
14 to 35 inches—brown very gravelly loam
35 inches—basalt
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Low
Restriction to rooting depth: Bedrock at a depth of 20 to 40 inches
Runoff: Very rapid
Hazard of erosion by water: Very severe

Characteristics of the Culdecole Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—30 to 34 inches
Air temperature—38 to 42 degrees F
Length of growing season—60 to 80 days
Slope range: 30 to 45 percent
Typical profile:
2 inches to 0—partially decomposed organic matter
0 to 2 inches—yellowish brown loam
2 to 8 inches—brown loam
8 to 14 inches—brown silt loam
14 to 34 inches—brown clay loam
34 to 50 inches—brown cobbly clay loam
50 inches—basalt
Depth class: Deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Restriction to rooting depth: Bedrock at a depth of 40 to 60 inches
Runoff: Very rapid
Hazard of erosion by water: Very severe

Contrasting Inclusions

- Ligget sandy loam
- Ticanot very cobbly loam

Use and Management

Major use: Woodland
Major management factors: Slope, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Brody soil—grand fir, Douglas fir, western larch, spruce, sedge, pine reedgrass; Culdecole soil—grand fir, Douglas fir, ponderosa pine, western larch, big blueberry, northern twinflower, elk sedge, heartleaf arnica
Mean site index for stated species (Brody soil): Grand fir—56
Estimated average production per acre (Brody soil): Grand fir—8,500 cubic feet of timber 0.6 inch in diameter or more at 80 years of age
Mean site index for stated species (Culdecole soil): Grand fir—45; Douglas fir—85
Estimated average production per acre (Culdecole soil): Grand fir—7,125 cubic feet of timber 0.6 inch in diameter or more at 80 years of age; Douglas fir—3,075 cubic feet of timber 0.6 inch in diameter or more at 40 years of age

Interpretive Groups

Capability classification: VIIe, nonirrigated

24—Brownlee sandy loam, 4 to 8 percent slopes

Composition

Brownlee soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Foothills and lacustrine terraces
Elevation: 2,700 to 4,000 feet

Characteristics of the Brownlee Soil

Position on landscape: Summits and side slopes
Climatic data (average annual):
Precipitation—15 to 17 inches
Air temperature—45 to 47 degrees F
Length of growing season—110 to 120 days
Typical profile:
0 to 12 inches—grayish brown and dark grayish brown sandy loam
12 to 32 inches—brown sandy clay loam
32 to 43 inches—strong brown sandy loam
43 to 60 inches—reddish yellow and light yellowish brown, stratified loamy coarse sand and coarse sand
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Runoff: Medium
Hazard of erosion by water: Slight

Contrasting Inclusions

- Deshler silty clay loam
- Soils that have a light-colored surface layer

Use and Management

Major use: Nonirrigated cropland
Major management factors: None

Interpretive Groups

Capability classification: IIIe, nonirrigated

25—Brownlee sandy loam, 8 to 20 percent slopes

Composition

Brownlee soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Foothills and lacustrine terraces
Elevation: 2,700 to 4,000 feet

Characteristics of the Brownlee Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—15 to 17 inches
Air temperature—45 to 47 degrees F
Length of growing season—110 to 120 days
Typical profile:
0 to 12 inches—grayish brown and dark grayish brown sandy loam
12 to 32 inches—brown sandy clay loam
32 to 43 inches—strong brown sandy loam
43 to 60 inches—reddish yellow and light yellowish brown, stratified loamy coarse sand and coarse sand
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Runoff: Medium
Hazard of erosion by water: Moderate

Contrasting Inclusions

- Deshler silty clay loam

Use and Management

Major uses: Hayland and pastureland
Major management factors: Slope and hazard of water erosion

Interpretive Groups

Capability classification: IVe, nonirrigated

26—Brownlee sandy loam, 20 to 35 percent slopes

Composition

Brownlee soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Foothills and lacustrine terraces
Elevation: 2,700 to 4,000 feet

Characteristics of the Brownlee Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—15 to 17 inches
Air temperature—45 to 47 degrees F

Length of growing season—110 to 120 days
Typical profile:
0 to 12 inches—grayish brown and dark grayish brown sandy loam
12 to 32 inches—brown sandy clay loam
32 to 43 inches—strong brown sandy loam
43 to 60 inches—reddish yellow and light yellowish brown, stratified loamy coarse sand and coarse sand
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Runoff: Rapid
Hazard of erosion by water: Moderate or severe

Contrasting Inclusions

- Deshler silty clay loam
- Rock outcrop

Use and Management

Major uses: Rangeland, hayland, and pastureland
Major management factors: Slope and hazard of water erosion
Dominant vegetation in potential plant community: Idaho fescue and antelope bitterbrush

Interpretive Groups

Capability classification: VIe, nonirrigated
Range site: Loamy, 16- to 20-inch precipitation zone

27—Brownlee loam, 1 to 4 percent slopes

Composition

Brownlee soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Lacustrine terraces
Elevation: 2,700 to 4,000 feet

Characteristics of the Brownlee Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—15 to 17 inches
Air temperature—45 to 47 degrees F
Length of growing season—110 to 120 days
Typical profile:
0 to 12 inches—grayish brown and dark grayish brown loam
12 to 32 inches—brown sandy clay loam
32 to 43 inches—strong brown sandy loam
43 to 60 inches—reddish yellow and light yellowish brown, stratified loamy coarse sand and coarse sand
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Runoff: Slow
Hazard of erosion by water: Slight

Contrasting Inclusions

- Demoss loam
- Deshler silty clay loam

Use and Management

Major uses: Hayland and pastureland
Major management factors: None

Interpretive Groups

Capability classification: IIc, nonirrigated

28—Bryan coarse sandy loam, 40 to 60 percent slopes

Composition

Bryan soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Mountains
Elevation: 4,200 to 6,000 feet

Characteristics of the Bryan Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—25 to 35 inches
Air temperature—36 to 40 degrees F
Length of growing season—30 to 80 days
Typical profile:
3 inches to 0—decomposed organic matter
0 to 14 inches—brown coarse sandy loam
14 to 36 inches—pale brown loamy coarse sand
36 to 60 inches—very pale brown gravelly loamy coarse sand
Depth class: Very deep
Drainage class: Excessively drained
Permeability: Very rapid
Available water capacity: Low
Runoff: Very rapid
Hazard of erosion by water: Severe or very severe

Contrasting Inclusions

- Bluebell cobbly loam
- Soils that are 20 to 40 inches deep to bedrock

Use and Management

Major use: Woodland
Major management factors: Slope, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Grand fir, Douglas fir, elk sedge, pine reedgrass, common snowberry, mountain blueberry, and mallow ninebark
Mean site index for stated species: Grand fir—51; Douglas fir—100
Estimated average annual production per acre: Grand fir—7,875 cubic feet of timber 0.6 inch in diameter or more at 80 years of age; Douglas fir—4,100 cubic feet of timber 0.6 inch in diameter or more at 40 years of age

Interpretive Groups

Capability classification: VIIe, nonirrigated

29—Cabarton silty clay loam, 0 to 5 percent slopes

Composition

Cabarton soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Stream terraces
Elevation: 3,800 to 4,800 feet

Characteristics of the Cabarton Soil

Position on landscape: Fluvial bottoms
Climatic data (average annual):
Precipitation—22 to 24 inches
Air temperature—36 to 43 degrees F
Length of growing season—60 to 70 days
Typical profile:
0 to 12 inches—gray silty clay loam
12 to 16 inches—light gray silt
16 to 40 inches—dark gray and gray clay
40 to 60 inches—gray clay loam
Depth class: Very deep
Drainage class: Poorly drained
Permeability: Slow
Available water capacity: High
Restriction to rooting depth: Water table at a depth of 6 to 18 inches
Runoff: Slow or medium
Hazard of erosion by water: Slight
Depth to water table: 6 to 18 inches in March through July
Frequency of flooding: Frequent
Shrink-swell potential: High

Contrasting Inclusions

- Blackwell clay loam
- Melton loam

Use and Management

Major uses: Hayland and pastureland
Major management factors: Wetness and hazard of flooding

Interpretive Groups

Capability classification: Vw, nonirrigated
Range site: Wet Meadow

30—Cashmere sandy loam, 2 to 4 percent slopes

Composition

Cashmere soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Fan terraces
Elevation: 2,200 to 2,500 feet

Characteristics of the Cashmere Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 51 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 11 inches—grayish brown sandy loam
11 to 25 inches—brown sandy loam
25 to 60 inches—pale brown sandy loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Moderate
Runoff: Medium
Hazard of erosion by water: Slight

Contrasting Inclusions

- Harpt loam
- Lolalita sandy loam
- Tindahay loamy coarse sand

Use and Management

Major use: Irrigated cropland
Major management factors: None

Interpretive Groups

Capability classification: IIe, irrigated

31—Cashmere sandy loam, 4 to 8 percent slopes

Composition

Cashmere soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Fan terraces
Elevation: 2,200 to 2,500 feet

Characteristics of the Cashmere Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 51 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 11 inches—grayish brown sandy loam
11 to 25 inches—brown sandy loam
25 to 60 inches—pale brown sandy loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Moderate
Runoff: Medium
Hazard of erosion by water: Slight

Contrasting Inclusions

- Harpt loam
- Lolalita sandy loam
- Tindahay loamy coarse sand

Use and Management

Major use: Irrigated cropland
Major management factor: Hazard of water erosion

Interpretive Groups

Capability classification: IIIe, irrigated

32—Catherine silt loam, 0 to 3 percent slopes

Composition

Catherine soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Stream terraces
Elevation: 2,500 to 3,500 feet

Characteristics of the Catherine Soil

Position on landscape: Fluvial bottoms
Climatic data (average annual):
Precipitation—18 to 22 inches
Air temperature—48 to 52 degrees F
Length of growing season—130 to 140 days
Typical profile:
0 to 22 inches—dark gray silt loam
22 to 60 inches—grayish brown silt loam
Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderate
Available water capacity: High
Restriction to rooting depth: Water table at a depth of 24 to 48 inches
Runoff: Slow
Hazard of erosion by water: Slight
Depth to water table: 24 to 48 inches in December through June
Frequency of flooding: Occasional

Contrasting Inclusions

- Langrell loam
- Shoepeg loam and silty clay loam

Use and Management

Major use: Irrigated cropland
Major management factors: Wetness and hazard of flooding

Interpretive Groups

Capability classification: IIw, irrigated

33—Chilcott-Vickery silt loams, 4 to 12 percent slopes

Composition

Chilcott soil and similar inclusions—50 percent
Vickery soil and similar inclusions—40 percent
Contrasting inclusions—10 percent

Setting

Landform: Fan terraces
Elevation: 2,400 to 3,000 feet

Characteristics of the Chilcott Soil

Position on landscape: Concave summits

Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 52 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 7 inches—light grayish brown silt loam
7 to 18 inches—grayish brown silty clay loam
18 to 26 inches—brown clay
26 to 40 inches—grayish brown clay loam
40 to 44 inches—hardpan
44 to 60 inches—very gravelly sand
Depth class: Moderately deep to a hardpan
Drainage class: Well drained
Permeability: Slow
Available water capacity: Moderate
Restrictions to rooting depth: Abrupt textural change at a depth of 5 to 10 inches; hardpan at a depth of 20 to 40 inches
Runoff: Medium
Hazard of erosion by water: Moderate

Characteristics of the Vickery Soil

Position on landscape: Convex summits
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 52 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 10 inches—pale brown silt loam
10 to 23 inches—pale brown silt loam
23 to 38 inches—light gray silt loam
38 to 42 inches—hardpan
42 to 60 inches—pale brown coarse sand
Depth class: Moderately deep to a hardpan
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Restriction to rooting depth: Hardpan at a depth of 20 to 40 inches
Runoff: Medium
Hazard of erosion by water: Moderate

Contrasting Inclusions

- Elijah silt loam
- Haw silt loam
- Lankbush sandy loam
- Lanktree loam
- Power silt loam

Use and Management

Major uses: Rangeland and irrigated cropland
Major management factors: Low precipitation, slope, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and Wyoming big sagebrush

Interpretive Groups

Capability classification: IVe, irrigated, and VIe, nonirrigated
Range site: Loamy, 10- to 12-inch precipitation zone

34—Clems fine sandy loam, 0 to 2 percent slopes

Composition

Clems soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Stream terraces
Elevation: 2,100 to 2,300 feet

Characteristics of the Clems Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 51 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 10 inches—grayish brown fine sandy loam
10 to 36 inches—grayish brown and brown fine sandy loam
36 to 56 inches—pale brown fine sandy loam
56 to 60 inches—brown silt loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Moderate
Runoff: Very slow
Hazard of erosion by water: Slight

Contrasting Inclusions

- Falk fine sandy loam
- Power silt loam
- Nyssaton silt loam
- Soils that are effervescent in the surface layer
- Soils that have coarse sand or pebbles at a depth of 20 to 30 inches

Use and Management

Major use: Irrigated cropland
Major management factors: None

Interpretive Groups

Capability classification: I, irrigated

35—Clems fine sandy loam, 2 to 4 percent slopes

Composition

Clems soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Stream terraces
Elevation: 2,100 to 2,300 feet

Characteristics of the Clems Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 51 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 10 inches—grayish brown fine sandy loam
10 to 36 inches—grayish brown and brown fine sandy loam
36 to 56 inches—pale brown fine sandy loam
56 to 60 inches—brown silt loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Moderate
Runoff: Slow
Hazard of erosion by water: Slight

Contrasting Inclusions

- Falk fine sandy loam
- Power silt loam
- Soils that have sand textures

Use and Management

Major use: Irrigated cropland
Major management factors: None

Interpretive Groups

Capability classification: IIe, irrigated

36—Cranecreek loam, 4 to 12 percent slopes

Composition

Cranecreek soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Foothills
Elevation: 2,500 to 4,000 feet

Characteristics of the Cranecreek Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—12 to 16 inches
Air temperature—47 to 52 degrees F
Length of growing season—110 to 140 days
Typical profile:
0 to 9 inches—light brownish gray loam
9 to 18 inches—brown loam
18 to 30 inches—brown clay loam
30 to 35 inches—strong brown clay
35 inches—semiconsolidated sediment
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low
Restriction to rooting depth: Semiconsolidated sediment at a depth of 20 to 40 inches
Runoff: Medium
Hazard of erosion by water: Slight

Contrasting Inclusions

- Reywat very stony loam
- Deterson clay loam

Use and Management

Major uses: Rangeland, hayland, and pastureland
Major management factors: Low precipitation, slope, and available water capacity
Dominant vegetation in potential plant community: Bluebunch wheatgrass and xeric big sagebrush

Interpretive Groups

Capability classification: IVe, nonirrigated
Range site: Loamy, 12- to 16-inch precipitation zone

37—Cranecreek-Reywat complex, 2 to 25 percent slopes

Composition

Cranecreek soil and similar inclusions—60 percent
Reywat soil and similar inclusions—30 percent
Contrasting inclusions—10 percent

Setting

Landform: Foothills
Elevation: 2,500 to 4,000 feet

Characteristics of the Cranecreek Soil

Position on landscape: Convex side slopes, shoulders, and summits
Climatic data (average annual):
Precipitation—12 to 14 inches
Air temperature—47 to 52 degrees F
Length of growing season—110 to 140 days
Slope range: 2 to 25 percent
Typical profile:
0 to 9 inches—light brownish gray loam
9 to 18 inches—brown loam
18 to 30 inches—brown clay loam
30 to 35 inches—strong brown clay
35 inches—semiconsolidated sediment
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low
Restriction to rooting depth: Semiconsolidated sediment at a depth of 20 to 40 inches
Runoff: Slow or medium
Hazard of erosion by water: Moderate

Characteristics of the Reywat Soil

Position on landscape: Concave side slopes and summits
Climatic data (average annual):
Precipitation—12 to 14 inches
Air temperature—47 to 52 degrees F
Length of growing season—110 to 140 days
Slope range: 2 to 12 percent
Typical profile:
0 to 6 inches—grayish brown very stony loam
6 to 19 inches—brown very gravelly clay loam
19 inches—basalt
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Very low
Restriction to rooting depth: Bedrock at a depth of 10 to 20 inches
Runoff: Slow or medium
Hazard of erosion by water: Slight or moderate

Contrasting Inclusions

- Deshler silty clay loam
- Bakeoven extremely stony loam
- Devnot very stony clay loam

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, available water capacity, depth to bedrock, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and xeric big sagebrush

Interpretive Groups

Capability classification: VIs, nonirrigated
Range site: Cranecreek soil—Loamy, 12- to 16-inch precipitation zone; Reywat soil—Shallow Stony Loam, 12- to 16-inch precipitation zone

38—Culdecole-Brody complex, 4 to 30 percent slopes

Composition

Culdecole soil and similar inclusions—60 percent
Brody soil and similar inclusions—30 percent
Contrasting inclusions—10 percent

Setting

Landform: Mountains
Elevation: 4,000 to 5,000 feet

Characteristics of the Culdecole Soil

Position on landscape: Side slopes and foot slopes
Climatic data (average annual):
Precipitation—30 to 34 inches
Air temperature—38 to 42 degrees F
Length of growing season—60 to 80 days
Slope range: 4 to 30 percent
Typical profile:
2 inches to 0—partially decomposed organic matter
0 to 2 inches—yellowish brown loam
2 to 8 inches—brown loam
8 to 14 inches—brown silt loam
14 to 34 inches—brown clay loam
34 to 50 inches—brown cobbly clay loam
50 inches—basalt
Depth class: Deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Restriction to rooting depth: Bedrock at a depth of 40 to 60 inches
Runoff: Medium or rapid
Hazard of erosion by water: Moderate or severe

Characteristics of the Brody Soil

Position on landscape: Side slopes and crests
Climatic data (average annual):
Precipitation—30 to 34 inches
Air temperature—38 to 42 degrees F
Length of growing season—60 to 80 days
Slope range: 20 to 30 percent

Typical profile:
3 inches to 0—partially decomposed organic matter
0 to 14 inches—brown loam
14 to 35 inches—brown very gravelly loam
35 inches—basalt
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Low
Restriction to rooting depth: Bedrock at a depth of 20 to 40 inches
Runoff: Medium or rapid
Hazard of erosion by water: Moderate or severe

Contrasting Inclusions

- Blackwell clay loam
- Cabarton silty clay loam
- Ligget sandy loam
- Ticanot very cobbly loam

Use and Management

Major use: Woodland
Major management factors: Available water capacity and hazard of water erosion
Dominant vegetation in potential plant community: Culdecole soil—grand fir, Douglas fir, ponderosa pine, western larch, big blueberry, northern twinflower, elk sedge, and heartleaf arnica; Brody soil—grand fir, Douglas fir, western larch, spruce, sedge, and pine reedgrass
Mean site index for stated species (Culdecole soil): Grand fir—45; Douglas fir—85
Estimated average production per acre (Culdecole soil): Grand fir—7,125 cubic feet of timber 0.6 inch in diameter or more at 80 years of age; Douglas fir—3,075 cubic feet of timber 0.6 inch in diameter or more at 40 years of age
Mean site index for stated species (Brody soil): Grand fir—56
Estimated average production per acre (Brody soil): Grand fir—8,500 cubic feet of timber 0.6 inch in diameter or more at 80 years of age

Interpretive Groups

Capability classification: VIe, nonirrigated

39—Dagor loam, 2 to 4 percent slopes

Composition

Dagor soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Stream terraces
Elevation: 2,500 to 3,000 feet

Characteristics of the Dagor Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—17 to 19 inches
Air temperature—45 to 47 degrees F
Length of growing season—120 to 130 days
Typical profile:
0 to 23 inches—dark grayish brown loam
23 to 33 inches—light brownish gray loam
33 to 60 inches—brown loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High
Runoff: Slow
Hazard of erosion by water: Slight

Contrasting Inclusions

- Langrell gravelly loam
- Newell clay loam

Use and Management

Major use: Irrigated cropland
Major management factors: None

Interpretive Groups

Capability classification: IIe, irrigated

40—Demast loam, 10 to 30 percent slopes

Composition

Demast soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Mountains
Elevation: 4,000 to 5,500 feet

Characteristics of the Demast Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—22 to 25 inches
Air temperature—35 to 40 degrees F
Length of growing season—70 to 80 days
Typical profile:
0 to 20 inches—very dark grayish brown loam
20 to 51 inches—dark brown gravelly loam
51 to 60 inches—dark brown very gravelly loam

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Runoff: Medium or rapid
Hazard of erosion by water: Moderate or severe

Contrasting Inclusions

- Bluebell cobbly loam
- Gestrin loam
- Sudpeak loam
- Ticanot very cobbly loam

Use and Management

Major use: Woodland
Major management factor: Hazard of water erosion
Dominant vegetation in potential plant community: Grand fir, Douglas fir, ponderosa pine, elk sedge, pine reedgrass, common snowberry, little princes pine, and heartleaf arnica
Mean site index for stated species: Grand fir—58; Douglas fir—90; ponderosa pine—100
Estimated average annual production per acre: Grand fir—8,750 cubic feet of timber 0.6 inch in diameter or more at 80 years of age; Douglas fir—3,400 cubic feet of timber 0.6 inch in diameter or more at 40 years of age; ponderosa pine—4,100 cubic feet of timber 0.6 inch in diameter or more at 40 years of age

Interpretive Groups

Capability classification: VIe, nonirrigated

41—Demast loam, 30 to 60 percent slopes

Composition

Demast soil and similar inclusions—80 percent
Contrasting inclusions—20 percent

Setting

Landform: Mountains
Elevation: 4,000 to 6,000 feet

Characteristics of the Demast Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—22 to 25 inches
Air temperature—35 to 40 degrees F
Length of growing season—70 to 80 days
Typical profile:
0 to 20 inches—very dark grayish brown loam
20 to 51 inches—dark brown gravelly loam
51 to 60 inches—dark brown very gravelly loam

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Runoff: Rapid or very rapid
Hazard of erosion by water: Severe or very severe

Contrasting Inclusions

- Bluebell cobbly loam
- Ticanot very cobbly loam
- Soils that are light colored and ashy

Use and Management

Major use: Woodland
Major management factors: Slope and hazard of water erosion
Dominant vegetation in potential plant community: Grand fir, Douglas fir, ponderosa pine, elk sedge, pine reedgrass, common snowberry, little princes pine, and heartleaf arnica
Mean site index for stated species: Grand fir—58; Douglas fir—90; ponderosa pine—100
Estimated average annual production per acre: Grand fir—8,750 cubic feet of timber 0.6 inch in diameter or more at 80 years of age; Douglas fir—3,400 cubic feet of timber 0.6 inch in diameter or more at 40 years of age; ponderosa pine—4,100 cubic feet of timber 0.6 inch in diameter or more at 40 years of age

Interpretive Groups

Capability classification: VIIe, nonirrigated

42—Demasters loam, 30 to 50 percent slopes

Composition

Demasters soil and similar inclusions—80 percent
Contrasting inclusions—20 percent

Setting

Landform: Mountains
Elevation: 3,600 to 5,000 feet

Characteristics of the Demasters Soil

Position on landscape: North-facing side slopes
Climatic data (average annual):
Precipitation—18 to 22 inches
Air temperature—41 to 44 degrees F
Length of growing season—105 to 115 days
Typical profile:
1 inch to 0—decomposed organic matter
0 to 17 inches—very dark grayish brown loam

17 to 25 inches—dark brown loam
25 to 36 inches—dark brown very gravelly loam
36 to 45 inches—dark yellowish brown very cobbly loam
45 inches—basalt
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Restriction to rooting depth: Bedrock at a depth of 40 to 60 inches
Runoff: Very rapid
Hazard of erosion by water: Severe

Contrasting Inclusions

- Jacknife loam
- Klicker stony loam
- Langrell gravelly loam
- Meland stony loam
- Riggins extremely stony loam
- Rock outcrop

Use and Management

Major use: Rangeland
Major management factors: Slope and hazard of water erosion
Dominant vegetation in potential plant community: Idaho fescue and mountain big sagebrush

Interpretive Groups

Capability classification: VIe, nonirrigated
Range site: North Slope Loamy, 16- to 22-inch precipitation zone

43—Demasters loam, 50 to 75 percent slopes

Composition

Demasters soil and similar inclusions—85 percent
Contrasting inclusions—15 percent

Setting

Landform: Mountains
Elevation: 3,600 to 5,000 feet

Characteristics of the Demasters Soil

Position on landscape: North-facing side slopes
Climatic data (average annual):
Precipitation—18 to 22 inches
Air temperature—41 to 44 degrees F
Length of growing season—105 to 110 days
Typical profile:
1 inch to 0—decomposed organic matter
0 to 17 inches—very dark grayish brown loam
17 to 25 inches—dark brown loam
25 to 36 inches—dark brown very gravelly loam
36 to 45 inches—dark yellowish brown very cobbly loam
45 inches—basalt
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Restriction to rooting depth: Bedrock at a depth of 40 to 60 inches
Runoff: Very rapid
Hazard of erosion by water: Very severe

Contrasting Inclusions

- Gwin very stony loam
- Meland stony loam
- Riggins extremely stony loam
- Rock outcrop

Use and Management

Major use: Rangeland
Major management factors: Slope and hazard of water erosion
Dominant vegetation in potential plant community: Idaho fescue and mountain big sagebrush

Interpretive Groups

Capability classification: VIIe, nonirrigated
Range site: North Slope Loamy, 16- to 22-inch precipitation zone

44—Demoss loam, 2 to 8 percent slopes

Composition

Demoss soil and similar inclusions—85 percent
Contrasting inclusions—15 percent

Setting

Landform: Lacustrine terraces
Elevation: 2,500 to 3,500 feet

Characteristics of the Demoss Soil

Position on landscape: Concave summits
Climatic data (average annual):
Precipitation—16 to 20 inches
Air temperature—48 to 52 degrees F
Length of growing season—120 to 140 days
Typical profile:
0 to 5 inches—dark grayish brown loam
5 to 9 inches—dark brown clay loam
9 to 12 inches—dark brown clay

12 to 17 inches—hardpan
17 inches—pale brown semiconsolidated sediment that breaks to sandy loam
Depth class: Shallow to a hardpan
Drainage class: Well drained
Permeability: Slow
Available water capacity: Very low
Restriction to rooting depth: Hardpan at a depth of 10 to 20 inches
Runoff: Slow or medium
Hazard of erosion by water: Slight

Contrasting Inclusions

- Brownlee sandy loam
- Midvale silty clay loam
- Soils that are 20 to 40 inches deep to a hardpan

Use and Management

Major uses: Hayland and pastureland
Major management factors: Depth to a hardpan and to semiconsolidated sediment and available water capacity

Interpretive Groups

Capability classification: VIe, nonirrigated

45—Deshler silty clay loam, 2 to 8 percent slopes

Composition

Deshler soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Foothills and lacustrine terraces
Elevation: 2,500 to 4,500 feet

Characteristics of the Deshler Soil

Position on landscape: Summits and side slopes
Climatic data (average annual):
Precipitation—13 to 16 inches
Air temperature—45 to 47 degrees F
Length of growing season—130 to 140 days
Typical profile:
0 to 15 inches—dark grayish brown silty clay loam
15 to 25 inches—dark grayish brown silty clay loam
25 to 30 inches—very pale brown clay
30 inches—volcanic tuff
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low
Restriction to rooting depth: Tuff at a depth of 20 to 40 inches
Runoff: Medium
Hazard of erosion by water: Slight

Contrasting Inclusions

- Agerdelly clay
- Devnot very stony clay loam
- Glasgow clay loam

Use and Management

Major use: Nonirrigated cropland
Major management factors: Low precipitation and available water capacity

Interpretive Groups

Capability classification: IVe, nonirrigated

46—Deshler silty clay loam, 8 to 20 percent slopes

Composition

Deshler soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Foothills and lacustrine terraces
Elevation: 2,500 to 4,500 feet

Characteristics of the Deshler Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—13 to 16 inches
Air temperature—45 to 47 degrees F
Length of growing season—130 to 140 days
Typical profile:
0 to 15 inches—dark grayish brown silty clay loam
15 to 25 inches—dark grayish brown silty clay loam
25 to 30 inches—very pale brown clay
30 inches—volcanic tuff
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low
Restriction to rooting depth: Tuff at a depth of 20 to 40 inches
Runoff: Medium
Hazard of erosion by water: Slight or moderate

Contrasting Inclusions

- Agerdelly clay

- Devnot very stony clay loam
- Glasgow clay loam

Use and Management

Major use: Nonirrigated cropland
Major management factors: Slope, available water capacity, low precipitation, and hazard of water erosion

Interpretive Groups

Capability classification: IVe, nonirrigated

47—Deshler silty clay loam, 20 to 30 percent slopes

Composition

Deshler soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Foothills and dissected lacustrine terraces
Elevation: 2,500 to 4,500 feet

Characteristics of the Deshler Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—14 to 16 inches
Air temperature—45 to 47 degrees F
Length of growing season—130 to 140 days
Typical profile:
0 to 15 inches—dark grayish brown silty clay loam
15 to 25 inches—dark grayish brown silty clay loam
25 to 30 inches—very pale brown clay
30 inches—volcanic tuff
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low
Restriction to rooting depth: Tuff at a depth of 20 to 40 inches
Runoff: Rapid
Hazard of erosion by water: Moderate or severe

Contrasting Inclusions

- Agerdelly clay
- Brownlee sandy loam
- Deterson clay loam
- Devnot very stony clay loam
- Glasgow clay loam

Use and Management

Major uses: Rangeland, hayland, and pastureland
Major management factors: Slope, available water capacity, low precipitation, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and xeric big sagebrush

Interpretive Groups

Capability classification: VIe, nonirrigated
Range site: Loamy, 12- to 16-inch precipitation zone

48—Deshler silty clay loam, 30 to 60 percent slopes

Composition

Deshler soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Foothills and dissected lacustrine terraces
Elevation: 2,500 to 4,500 feet

Characteristics of the Deshler Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—14 to 16 inches
Air temperature—45 to 47 degrees F
Length of growing season—130 to 140 days
Typical profile:
0 to 15 inches—dark grayish brown silty clay loam
15 to 25 inches—dark grayish brown silty clay loam
25 to 30 inches—very pale brown clay
30 inches—volcanic tuff
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low
Restriction to rooting depth: Tuff at a depth of 20 to 40 inches
Runoff: Very rapid
Hazard of erosion by water: Very severe

Contrasting Inclusions

- Agerdelly clay
- Brownlee sandy loam
- Deterson silt loam
- Devnot very stony clay loam
- Glasgow clay loam

Use and Management

Major use: Rangeland
Major management factors: Slope, available water capacity, and hazard of water erosion

Dominant vegetation in potential plant community: Bluebunch wheatgrass and xeric big sagebrush

Interpretive Groups

Capability classification: VIIe, nonirrigated
Range site: South Slope Loamy, 12- to 16-inch precipitation zone

49—Deshler extremely stony clay loam, 2 to 30 percent slopes

Composition

Deshler soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Foothills
Elevation: 2,500 to 4,500 feet

Characteristics of the Deshler Soil

Position on landscape: Summits and side slopes
Climatic data (average annual):
Precipitation—14 to 16 inches
Air temperature—45 to 47 degrees F
Length of growing season—130 to 140 days
Typical profile:
0 to 15 inches—dark grayish brown extremely stony clay loam
15 to 25 inches—dark grayish brown silty clay loam
25 to 30 inches—very pale brown clay
30 inches—volcanic tuff
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low
Restriction to rooting depth: Tuff at a depth of 20 to 40 inches
Runoff: Slow to rapid
Hazard of erosion by water: Slight to severe

Contrasting Inclusions

- Glasgow clay loam
- Reywat very stony loam

Use and Management

Major use: Rangeland
Major management factors: Stones on the surface, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and basin big sagebrush

Interpretive Groups

Capability classification: VIIs, nonirrigated
Range site: Stony Loam, 12- to 16-inch precipitation zone

50—Deshler extremely stony clay loam, 30 to 60 percent slopes

Composition

Deshler soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Foothills
Elevation: 2,500 to 4,500 feet

Characteristics of the Deshler Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—14 to 16 inches
Air temperature—45 to 47 degrees F
Length of growing season—130 to 140 days
Typical profile:
0 to 15 inches—dark grayish brown extremely stony clay loam
15 to 25 inches—dark grayish brown silty clay loam
25 to 30 inches—very pale brown clay
30 inches—volcanic tuff
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low
Restriction to rooting depth: Tuff at a depth of 20 to 40 inches
Runoff: Very rapid
Hazard of erosion by water: Severe

Contrasting Inclusions

- Glasgow clay loam
- Reywat very stony loam

Use and Management

Major use: Rangeland
Major management factors: Slope, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and basin big sagebrush

Interpretive Groups

Capability classification: VIIs, nonirrigated

Range site: South Slope Stony, 12- to 16-inch precipitation zone

51—Deshler-Agerdelly complex, 8 to 30 percent slopes

Composition

Deshler soil and similar inclusions—55 percent
Agerdelly soil and similar inclusions—40 percent
Contrasting inclusions—5 percent

Setting

Landform: Foothills and lacustrine terraces
Elevation: 2,500 to 4,500 feet

Characteristics of the Deshler Soil

Position on landscape: Summits and side slopes
Climatic data (average annual):
Precipitation—13 to 15 inches
Air temperature—46 to 50 degrees F
Length of growing season—130 to 145 days
Typical profile:
0 to 15 inches—dark grayish brown silty clay loam
15 to 25 inches—dark grayish brown silty clay loam
25 to 30 inches—very pale brown clay
30 inches—volcanic tuff
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low
Restriction to rooting depth: Tuff at a depth of 20 to 40 inches
Runoff: Medium or rapid
Hazard of erosion by water: Moderate or severe

Characteristics of the Agerdelly Soil

Position on landscape: Summits and side slopes
Climatic data (average annual):
Precipitation—12 to 14 inches
Air temperature—46 to 50 degrees F
Length of growing season—130 to 145 days
Typical profile:
0 to 60 inches—light brownish gray clay
Depth class: Very deep
Drainage class: Well drained
Permeability: Very slow
Available water capacity: High
Runoff: Medium or rapid
Hazard of erosion by water: Moderate or severe

Contrasting Inclusions

- Glasgow clay loam
- Deterson clay loam
- Payette coarse sandy loam

Use and Management

Major uses: Rangeland, hayland, and pastureland
Major management factors: Low precipitation, slope, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and xeric big sagebrush

Interpretive Groups

Capability classification: VIe, nonirrigated
Range site: Deshler soil—Loamy, 12- to 16-inch precipitation zone; Agerdelly soil—Churning Clay, 11- to 16-inch precipitation zone

52—Deshler-Agerdelly complex, 30 to 60 percent slopes

Composition

Deshler soil and similar inclusions—55 percent
Agerdelly soil and similar inclusions—40 percent
Contrasting inclusions—5 percent

Setting

Landform: Foothills and dissected lacustrine terraces
Elevation: 2,500 to 4,500 feet

Characteristics of the Deshler Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—13 to 15 inches
Air temperature—46 to 50 degrees F
Length of growing season—130 to 145 days
Typical profile:
0 to 15 inches—dark grayish brown silty clay loam
15 to 25 inches—dark grayish brown silty clay loam
25 to 30 inches—very pale brown clay
30 inches—volcanic tuff
Depth class: Moderately deep
Drainage class: Well drained

Permeability: Slow
Available water capacity: Low
Restriction to rooting depth: Tuff at a depth of 20 to 40 inches
Runoff: Very rapid
Hazard of erosion by water: Severe or very severe

Characteristics of the Agerdelly Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—12 to 14 inches
Air temperature—46 to 50 degrees F
Length of growing season—130 to 145 days
Typical profile:
0 to 60 inches—light brownish gray clay
Depth class: Very deep
Drainage class: Well drained
Permeability: Very slow
Available water capacity: High
Runoff: Very rapid
Hazard of erosion by water: Severe or very severe

Contrasting Inclusions

- Deterson silt loam
- Glasgow clay loam

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, slope, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and xeric big sagebrush

Interpretive Groups

Capability classification: VIIe, nonirrigated
Range site: Deshler soil—South Slope Loamy, 12- to 16-inch precipitation zone; Agerdelly soil—Churning Clay, 11- to 16-inch precipitation zone

53—Deshler-Agerdelly complex, extremely stony, 2 to 30 percent slopes

Composition

Deshler soil and similar inclusions—50 percent
Agerdelly soil and similar inclusions—40 percent
Contrasting inclusions—10 percent

Setting

Landform: Foothills and lacustrine terraces
Elevation: 2,500 to 4,500 feet

Characteristics of the Deshler Soil

Position on landscape: Summits and side slopes
Climatic data (average annual):
Precipitation—13 to 15 inches
Air temperature—46 to 50 degrees F
Length of growing season—130 to 145 days
Typical profile:
0 to 15 inches—dark grayish brown extremely stony silty clay loam
15 to 25 inches—dark grayish brown silty clay loam
25 to 30 inches—very pale brown clay
30 inches—volcanic tuff
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low
Restriction to rooting depth: Tuff at a depth of 20 to 40 inches
Runoff: Slow to rapid
Hazard of erosion by water: Slight to severe

Characteristics of the Agerdelly Soil

Position on landscape: Summits and side slopes
Climatic data (average annual):
Precipitation—12 to 14 inches
Air temperature—46 to 50 degrees F
Length of growing season—130 to 145 days
Typical profile:
0 to 10 inches—light brownish gray extremely stony clay
10 to 60 inches—light brownish gray clay
Depth class: Very deep
Drainage class: Well drained
Permeability: Very slow
Available water capacity: High
Runoff: Slow to rapid
Hazard of erosion by water: Slight to severe

Contrasting Inclusions

- Glasgow clay loam
- Lankbush sandy loam

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, stones on the surface, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Deshler soil—bluebunch wheatgrass and basin big sagebrush; Agerdelly soil—bluebunch wheatgrass and xeric big sagebrush

Interpretive Groups

Capability classification: VIIs, nonirrigated
Range site: Deshler soil—Stony Loam, 12- to 16-inch precipitation zone; Agerdelly soil—Churning Clay, 11- to 16-inch precipitation zone

54—Deshler-Agerdelly complex, extremely stony, 30 to 60 percent slopes

Composition

Deshler soil and similar inclusions—50 percent
Agerdelly soil and similar inclusions—40 percent
Contrasting inclusions—10 percent

Setting

Landform: Foothills and dissected lacustrine terraces
Elevation: 2,500 to 4,500 feet

Characteristics of the Deshler Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—13 to 15 inches
Air temperature—46 to 50 degrees F
Length of growing season—130 to 145 days
Typical profile:
0 to 15 inches—dark grayish brown extremely stony silty clay loam
15 to 25 inches—dark grayish brown silty clay loam
25 to 30 inches—very pale brown clay
30 inches—volcanic tuff
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low
Restriction to rooting depth: Tuff at a depth of 20 to 40 inches
Runoff: Very rapid
Hazard of erosion by water: Very severe

Characteristics of the Agerdelly Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—12 to 14 inches
Air temperature—46 to 50 degrees F
Length of growing season—130 to 145 days
Typical profile:
0 to 10 inches—light brownish gray extremely stony clay
10 to 60 inches—light brownish gray clay
Depth class: Very deep
Drainage class: Well drained
Permeability: Very slow
Available water capacity: High
Runoff: Very rapid
Hazard of erosion by water: Very severe

Contrasting Inclusions

- Bakeoven extremely stony loam
- Glasgow clay loam
- Reywat very stony loam

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, slope, available water capacity, stones on the surface, and hazard of water erosion
Dominant vegetation in potential plant community: Deshler soil—bluebunch wheatgrass and basin big sagebrush; Agerdelly soil—bluebunch wheatgrass and xeric big sagebrush

Interpretive Groups

Capability classification: VIIs, nonirrigated
Range site: Deshler soil—South Slope Stony, 12- to 16-inch precipitation zone; Agerdelly soil—Churning Clay, 11- to 16-inch precipitation zone

55—Deshler-Brownlee complex, 2 to 8 percent slopes

Composition

Deshler soil and similar inclusions—50 percent
Brownlee soil and similar inclusions—40 percent
Contrasting inclusions—10 percent

Setting

Landform: Foothills and lacustrine terraces
Elevation: 2,500 to 4,000 feet

Characteristics of the Deshler Soil

Position on landscape: Foot slopes and summits
Climatic data (average annual):
Precipitation—14 to 16 inches
Air temperature—46 to 50 degrees F
Length of growing season—110 to 120 days
Typical profile:
0 to 15 inches—dark grayish brown loam
15 to 25 inches—dark grayish brown silty clay loam

25 to 30 inches—very pale brown clay
30 inches—volcanic tuff
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low
Restriction to rooting depth: Tuff at a depth of 20 to 40 inches
Runoff: Medium
Hazard of erosion by water: Slight or moderate

Characteristics of the Brownlee Soil

Position on landscape: Foot slopes and summits
Climatic data (average annual):
Precipitation—15 to 17 inches
Air temperature—46 to 50 degrees F
Length of growing season—110 to 120 days
Typical profile:
0 to 12 inches—grayish brown and dark grayish brown sandy loam
12 to 32 inches—brown sandy clay loam
32 to 43 inches—strong brown sandy loam
43 to 60 inches—reddish yellow and light yellowish brown, stratified loamy coarse sand and coarse sand
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Runoff: Medium
Hazard of erosion by water: Slight

Contrasting Inclusions

- Demoss loam
- Deterson clay loam
- Soils that are 10 to 20 inches deep to tuff

Use and Management

Major use: Nonirrigated cropland
Major management factors: Available water capacity and hazard of water erosion

Interpretive Groups

Capability classification: IVe, nonirrigated

56—Deshler-Brownlee complex, 8 to 20 percent slopes

Composition

Deshler soil and similar inclusions—50 percent
Brownlee soil and similar inclusions—40 percent
Contrasting inclusions—10 percent

Setting

Landform: Foothills and lacustrine terraces
Elevation: 2,500 to 4,000 feet

Characteristics of the Deshler Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—14 to 16 inches
Air temperature—46 to 50 degrees F
Length of growing season—110 to 120 days
Typical profile:
0 to 15 inches—dark grayish brown loam
15 to 25 inches—dark grayish brown silty clay loam
25 to 30 inches—very pale brown clay
30 inches—volcanic tuff
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low
Restriction to rooting depth: Tuff at a depth of 20 to 40 inches
Runoff: Medium
Hazard of erosion by water: Slight or moderate

Characteristics of the Brownlee Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—15 to 17 inches
Air temperature—46 to 50 degrees F
Length of growing season—110 to 120 days
Typical profile:
0 to 12 inches—grayish brown and dark grayish brown sandy loam
12 to 32 inches—brown sandy clay loam
32 to 43 inches—strong brown sandy loam
43 to 60 inches—reddish yellow and light yellowish brown, stratified loamy coarse sand and coarse sand
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Runoff: Medium
Hazard of erosion by water: Slight or moderate

Contrasting Inclusions

- Demoss loam
- Devnot very stony clay loam
- Soils that are 10 to 20 inches deep to tuff

Use and Management

Major use: Nonirrigated cropland

Major management factors: Slope, available water capacity, and hazard of water erosion

Interpretive Groups

Capability classification: IVe, nonirrigated

57—Deshler-Brownlee complex, 20 to 30 percent slopes

Composition

Deshler soil and similar inclusions—55 percent
Brownlee soil and similar inclusions—35 percent
Contrasting inclusions—10 percent

Setting

Landform: Foothills and dissected lacustrine terraces
Elevation: 2,500 to 4,000 feet

Characteristics of the Deshler Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—14 to 16 inches
Air temperature—46 to 50 degrees F
Length of growing season—110 to 120 days
Typical profile:
0 to 15 inches—dark grayish brown loam
15 to 25 inches—dark grayish brown silty clay loam
25 to 30 inches—very pale brown clay
30 inches—volcanic tuff
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low
Restriction to rooting depth: Tuff at a depth of 20 to 40 inches
Runoff: Rapid
Hazard of erosion by water: Moderate or severe

Characteristics of the Brownlee Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—15 to 17 inches
Air temperature—46 to 50 degrees F
Length of growing season—110 to 120 days
Typical profile:
0 to 12 inches—grayish brown sandy loam
12 to 32 inches—brown sandy clay loam
32 to 43 inches—strong brown sandy loam
43 to 60 inches—reddish yellow and light yellowish brown, stratified loamy coarse sand and coarse sand
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Runoff: Rapid
Hazard of erosion by water: Moderate or severe

Contrasting Inclusions

- Soils that are 10 to 20 inches deep to tuff

Use and Management

Major uses: Nonirrigated cropland and rangeland
Major management factors: Slope, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Deshler soil—bluebunch wheatgrass and xeric big sagebrush; Brownlee soil—Idaho fescue and antelope bitterbrush

Interpretive Groups

Capability classification: VIe, nonirrigated
Range site: Deshler soil—Loamy, 12- to 16-inch precipitation zone; Brownlee soil—Loamy, 16- to 20-inch precipitation zone

58—Deshler-Devnot complex, 2 to 30 percent slopes

Composition

Deshler soil and similar inclusions—60 percent
Devnot soil and similar inclusions—35 percent
Contrasting inclusions—5 percent

Setting

Landform: Foothills
Elevation: 2,500 to 4,500 feet

Characteristics of the Deshler Soil

Position on landscape: Summits and side slopes
Climatic data (average annual):
Precipitation—13 to 15 inches
Air temperature—46 to 50 degrees F
Length of growing season—130 to 140 days
Typical profile:
0 to 15 inches—dark grayish brown silty clay loam
15 to 25 inches—dark grayish brown silty clay loam
25 to 30 inches—very pale brown clay
30 inches—volcanic tuff
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow

Available water capacity: Low
Restriction to rooting depth: Tuff at a depth of 20 to 40 inches
Runoff: Slow to rapid
Hazard of erosion by water: Slight or moderate

Characteristics of the Devnot Soil

Position on landscape: Summits and side slopes
Climatic data (average annual):
Precipitation—12 to 14 inches
Air temperature—46 to 50 degrees F
Length of growing season—130 to 140 days
Typical profile:
0 to 4 inches—grayish brown very stony clay loam
4 to 19 inches—dark grayish brown stony clay
19 inches—basalt
Depth class: Shallow
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low
Restriction to rooting depth: Bedrock at a depth of 10 to 20 inches
Runoff: Slow to rapid
Hazard of erosion by water: Slight or moderate

Contrasting Inclusions

- Agerdelly clay
- Bakeoven extremely stony loam
- Brownlee sandy loam
- Glasgow clay loam
- Soils that are 10 to 20 inches deep to tuff

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, available water capacity, stones on the surface, depth to bedrock, and hazard of water erosion
Dominant vegetation in potential plant community: Deshler soil—bluebunch wheatgrass and xeric big sagebrush; Devnot soil—Sandberg bluegrass and stiff sagebrush

Interpretive Groups

Capability classification: VIe, nonirrigated
Range site: Deshler soil—Loamy, 12- to 16-inch precipitation zone; Devnot soil—Very Shallow, 12- to 20-inch precipitation zone

59—Deshler-Devnot complex, 30 to 60 percent slopes

Composition

Deshler soil and similar inclusions—70 percent
Devnot soil and similar inclusions—25 percent
Contrasting inclusions—5 percent

Setting

Landform: Foothills
Elevation: 2,500 to 4,500 feet

Characteristics of the Deshler Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—13 to 15 inches
Air temperature—46 to 50 degrees F
Length of growing season—130 to 140 days
Typical profile:
0 to 15 inches—dark grayish brown silty clay loam
15 to 25 inches—dark grayish brown silty clay loam
25 to 30 inches—very pale brown clay
30 inches—volcanic tuff
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low
Restriction to rooting depth: Tuff at a depth of 20 to 40 inches
Runoff: Very rapid
Hazard of erosion by water: Very severe

Characteristics of the Devnot Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—12 to 14 inches
Air temperature—46 to 50 degrees F
Length of growing season—130 to 140 days
Typical profile:
0 to 4 inches—grayish brown very stony clay loam
4 to 19 inches—dark grayish brown stony clay
19 inches—basalt
Depth class: Shallow
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low
Restriction to rooting depth: Bedrock at a depth of 10 to 20 inches
Runoff: Very rapid
Hazard of erosion by water: Very severe

Contrasting Inclusions

- Agerdelly clay
- Bakeoven extremely stony loam
- Glasgow clay loam
- Soils that are 10 to 20 inches deep to tuff

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, slope, stones on the surface, available water capacity, depth to bedrock, and hazard of water erosion
Dominant vegetation in potential plant community: Deshler soil—bluebunch wheatgrass and xeric big sagebrush; Devnot soil—Sandberg bluegrass and stiff sagebrush

Interpretive Groups

Capability classification: IIe, nonirrigated
Range site: Deshler soil—South Slope Loamy, 12- to 16-inch precipitation zone; Devnot soil—Very Shallow, 12- to 20-inch precipitation zone

60—Deterson silt loam, 30 to 60 percent slopes

Composition

Deterson soil and similar inclusions—85 percent
Contrasting inclusions—15 percent

Setting

Landform: Foothills
Elevation: 2,500 to 4,500 feet

Characteristics of the Deterson Soil

Position on landscape: North-facing side slopes
Climatic data (average annual):
Precipitation—12 to 16 inches
Air temperature—46 to 50 degrees F
Length of growing season—135 to 145 days
Typical profile:
0 to 5 inches—grayish brown silt loam
5 to 23 inches—dark grayish brown silt loam
23 to 32 inches—dark grayish brown clay loam
32 to 60 inches—dark brown clay
Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: High
Runoff: Very rapid
Hazard of erosion by water: Very severe

Contrasting Inclusions

- Agerdelly clay
- Brownlee sandy loam
- Deshler silty clay loam
- Gem stony clay loam
- Newell clay loam
- Rock outcrop

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, slope, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and xeric big sagebrush

Interpretive Groups

Capability classification: VIIe, nonirrigated
Range site: North Slope Loamy, 12- to 16-inch precipitation zone

61—Deterson clay loam, 5 to 30 percent slopes

Composition

Deterson soil and similar inclusions—85 percent
Contrasting inclusions—15 percent

Setting

Landform: Foothills
Elevation: 2,500 to 4,500 feet

Characteristics of the Deterson Soil

Position on landscape: North-facing side slopes
Climatic data (average annual):
Precipitation—12 to 16 inches
Air temperature—46 to 50 degrees F
Length of growing season—135 to 145 days
Typical profile:
0 to 6 inches—dark grayish brown clay loam
6 to 14 inches—very dark grayish brown silt loam
14 to 30 inches—dark brown clay
30 to 60 inches—grayish brown clay
Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: High
Runoff: Medium or rapid
Hazard of erosion by water: Moderate or severe

Contrasting Inclusions

- Agerdelly clay
- Brownlee sandy loam
- Deshler silty clay loam
- Gem stony clay loam

Use and Management

Major uses: Rangeland and nonirrigated cropland
Major management factors: Low precipitation and hazard of water erosion

Dominant vegetation in potential plant community: Bluebunch wheatgrass and xeric big sagebrush

Interpretive Groups

Capability classification: IVe, nonirrigated
Range site: Loamy, 12- to 16-inch precipitation zone

62—Dishner-Haw complex, 2 to 30 percent slopes

Composition

Dishner soil and similar inclusions—50 percent
Haw soil and similar inclusions—40 percent
Contrasting inclusions—10 percent

Setting

Landform: Dissected lacustrine terraces
Elevation: 2,300 to 2,700 feet

Characteristics of the Dishner Soil

Position on landscape: Side slopes and summits
Climatic data (average annual):
Precipitation—11 to 13 inches
Air temperature—47 to 51 degrees F
Length of growing season—120 to 145 days
Typical profile:
0 to 8 inches—light brownish gray extremely stony loam
8 to 12 inches—pale brown clay
12 inches—sandstone
Depth class: Shallow
Drainage class: Well drained
Permeability: Slow
Available water capacity: Very low
Restriction to rooting depth: Bedrock at a depth of 10 to 20 inches
Runoff: Medium
Hazard of erosion by water: Slight to severe

Characteristics of the Haw Soil

Position on landscape: Side slopes and shoulders
Climatic data (average annual):
Precipitation—11 to 13 inches
Air temperature—48 to 51 degrees F
Length of growing season—120 to 145 days
Typical profile:
0 to 17 inches—grayish brown silt loam
17 to 26 inches—brown clay loam
26 to 38 inches—pale brown clay loam
38 to 60 inches—very pale brown coarse sandy loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: High
Runoff: Slow to rapid
Hazard of erosion by water: Slight to severe

Contrasting Inclusions

- Lolalita sandy loam
- Payette coarse sandy loam
- Saralegui sandy loam

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, depth to bedrock, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Dishner soil—Sandberg bluegrass and stiff sagebrush; Haw soil—bluebunch wheatgrass and Wyoming big sagebrush

Interpretive Groups

Capability classification: VIIs, nonirrigated
Range site: Dishner soil—Very Shallow, 12- to 20-inch precipitation zone; Haw soil—Loamy, 12- to 16-inch precipitation zone

63—Donnel sandy loam, 0 to 4 percent slopes

Composition

Donnel soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Alluvial fans
Elevation: 3,800 to 4,800 feet

Characteristics of the Donnel Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—22 to 24 inches
Air temperature—38 to 43 degrees F
Length of growing season—65 to 75 days
Typical profile:
0 to 20 inches—dark grayish brown sandy loam
20 to 23 inches—grayish brown sandy loam
23 to 39 inches—yellowish brown sandy loam
39 to 60 inches—light yellowish brown loamy sand
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid

Available water capacity: Moderate
Runoff: Slow
Hazard of erosion by water: Slight

Contrasting Inclusions

- Roseberry loam
- Kangas coarse sandy loam

Use and Management

Major use: Nonirrigated cropland
Major management factor: Short growing season

Interpretive Groups

Capability classification: IVs, nonirrigated

64—Duneland

Composition

Duneland—85 percent
Contrasting inclusions—15 percent

Setting

Landform: Stream terraces
Elevation: 2,100 to 2,200 feet
Climatic data (average annual):
Precipitation—8 to 12 inches
Air temperature—50 to 54 degrees F

Characteristics of the Duneland

Kind of material: Sand that is continuously moved by wind
Height of dunes: 2 to 50 feet
Vegetation: None

Contrasting Inclusions

- Tindahay loamy coarse sand
- Cashmere sandy loam
- Areas that have a thin sandy loam or loamy sand surface layer and support sparse vegetation

Use

Recreation

Interpretive Groups

Capability classification: VIII

65—Elijah silt loam, 4 to 8 percent slopes

Composition

Elijah soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Fan terraces
Elevation: 2,300 to 3,000 feet

Characteristics of the Elijah Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—47 to 49 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 12 inches—light brownish gray silt loam
12 to 20 inches—very pale brown silty clay loam
20 to 38 inches—light gray silt loam
38 to 53 inches—hardpan
53 to 60 inches—sand
Depth class: Moderately deep to a hardpan
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Restriction to rooting depth: Hardpan at a depth of 20 to 40 inches
Runoff: Medium
Hazard of erosion by water: Slight

Contrasting Inclusions

- Chilcott silt loam
- Power silt loam
- Purdam silt loam
- Vickery silt loam

Use and Management

Major use: Irrigated cropland
Major management factor: Slope

Interpretive Groups

Capability classification: IIIe, irrigated

66—Elijah silt loam, 8 to 12 percent slopes

Composition

Elijah soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Fan terraces
Elevation: 2,300 to 3,000 feet

Characteristics of the Elijah Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 12 inches

Air temperature—47 to 49 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 12 inches—light brownish gray silt loam
12 to 20 inches—very pale brown silty clay loam
20 to 38 inches—light gray silt loam
38 to 53 inches—hardpan
53 to 60 inches—sand
Depth class: Moderately deep to a hardpan
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Restriction to rooting depth: Hardpan at a depth of 20 to 40 inches
Runoff: Medium
Hazard of erosion by water: Moderate

Contrasting Inclusions

- Chilcott silt loam
- Power silt loam
- Purdam silt loam
- Vickery silt loam

Use and Management

Major use: Irrigated cropland
Major management factor: Slope

Interpretive Groups

Capability classification: IVe, irrigated

67—Falk fine sandy loam, 0 to 2 percent slopes

Composition

Falk soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Stream terraces
Elevation: 2,100 to 2,300 feet

Characteristics of the Falk Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—47 to 52 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 10 inches—light brownish gray fine sandy loam
10 to 22 inches—light brownish gray fine sandy loam
22 to 38 inches—light gray fine sandy loam
38 to 60 inches—very gravelly sand
Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderately rapid in the upper part and rapid below
Available water capacity: Moderate
Restriction to rooting depth: Water table at a depth of 36 to 60 inches
Runoff: Very slow
Hazard of erosion by water: Slight
Depth to water table: 36 to 60 inches in April through October
Frequency of flooding: Rare in most areas, but occasional in areas adjacent to the Snake and Weiser Rivers

Contrasting Inclusions

- Baldock silt loam
- Moulton fine sandy loam
- Notus sandy loam
- Soils that are moderately sodic

Use and Management

Major use: Irrigated cropland
Major management factor: Wetness

Interpretive Groups

Capability classification: IIw, irrigated

68—Gem stony clay loam, 2 to 30 percent slopes

Composition

Gem soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Foothills
Elevation: 3,000 to 4,800 feet

Characteristics of the Gem Soil

Position on landscape: Summits and side slopes
Climatic data (average annual):
Precipitation—12 to 16 inches
Air temperature—45 to 50 degrees F
Length of growing season—130 to 140 days
Typical profile:
0 to 10 inches—grayish brown stony clay loam
10 to 14 inches—grayish brown gravelly clay loam
14 to 29 inches—brown clay
29 inches—basalt

Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low
Restriction to rooting depth: Bedrock at a depth of 20 to 40 inches
Runoff: Medium or rapid
Hazard of erosion by water: Moderate or severe

Contrasting Inclusions

- Agerdelly clay
- Bakeoven extremely stony loam
- Deshler silty clay loam
- Reywat very stony loam

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and xeric big sagebrush

Interpretive Groups

Capability classification: VIe, nonirrigated
Range site: Loamy, 12- to 16-inch precipitation zone

69—Gem stony clay loam, 30 to 60 percent slopes

Composition

Gem soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Foothills
Elevation: 3,000 to 4,800 feet

Characteristics of the Gem Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—12 to 16 inches
Air temperature—45 to 50 degrees F
Length of growing season—130 to 140 days
Typical profile:
0 to 10 inches—grayish brown stony clay loam
10 to 14 inches—grayish brown gravelly clay loam
14 to 29 inches—brown clay
29 inches—basalt
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low
Restriction to rooting depth: Bedrock at a depth of 20 to 40 inches
Runoff: Very rapid
Hazard of erosion by water: Very severe

Contrasting Inclusions

- Deshler silty clay loam
- Reywat very stony loam
- Gem soils that are extremely stony

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, slope, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and xeric big sagebrush

Interpretive Groups

Capability classification: VIIe, nonirrigated
Range site: South Slope Loamy, 12- to 16-inch precipitation zone

70—Gem extremely stony clay loam, 2 to 30 percent slopes

Composition

Gem soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Foothills
Elevation: 3,000 to 4,800 feet

Characteristics of the Gem Soil

Position on landscape: Summits and side slopes
Climatic data (average annual):
Precipitation—12 to 16 inches
Air temperature—45 to 50 degrees F
Length of growing season—130 to 140 days
Typical profile:
0 to 10 inches—grayish brown extremely stony clay loam
10 to 14 inches—grayish brown gravelly clay loam
14 to 29 inches—brown clay
29 inches—basalt
Depth class: Moderately deep
Drainage class: Well drained

Permeability: Slow
Available water capacity: Low
Restriction to rooting depth: Bedrock at a depth of 20 to 40 inches
Runoff: Medium or rapid
Hazard of erosion by water: Moderate or severe

Contrasting Inclusions

- Bakeoven extremely stony loam
- Reywat very stony loam

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, stones on the surface, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and basin big sagebrush

Interpretive Groups

Capability classification: VIIs, nonirrigated
Range site: Stony Loam, 12- to 16-inch precipitation zone

71—Gem-Bakeoven complex, 2 to 30 percent slopes

Composition

Gem soil and similar inclusions—50 percent
Bakeoven soil and similar inclusions—35 percent
Contrasting inclusions—15 percent

Setting

Landform: Foothills and mountains
Elevation: 3,000 to 4,800 feet

Characteristics of the Gem Soil

Position on landscape: Summits and side slopes
Climatic data (average annual):
Precipitation—12 to 16 inches
Air temperature—47 to 50 degrees F
Length of growing season—130 to 140 days
Typical profile:
0 to 10 inches—grayish brown very stony clay loam
10 to 14 inches—grayish brown gravelly clay loam
14 to 29 inches—brown clay
29 inches—basalt
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low
Restriction to rooting depth: Bedrock at a depth of 20 to 40 inches
Runoff: Medium or rapid
Hazard of erosion by water: Moderate or severe

Characteristics of the Bakeoven Soil

Position on landscape: Side slopes, shoulders, and summits
Climatic data (average annual):
Precipitation—12 to 16 inches
Air temperature—47 to 50 degrees F
Length of growing season—130 to 140 days
Typical profile:
0 to 3 inches—grayish brown extremely stony loam
3 to 5 inches—brown very cobbly loam
5 to 9 inches—brown very gravelly clay loam
9 inches—basalt
Depth class: Very shallow
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Very low
Restriction to rooting depth: Bedrock at a depth of 4 to 10 inches
Runoff: Medium or rapid
Hazard of erosion by water: Moderate or severe

Contrasting Inclusions

- Deshler silty clay loam
- Reywat very stony loam
- Soils that have a reddish brown surface layer
- Rock outcrop

Use and Management

Major use: Rangeland
Major management factors: Available water capacity, stones on the surface, low precipitation, depth to bedrock, and hazard of water erosion
Dominant vegetation in potential plant community: Gem soil—bluebunch wheatgrass and xeric big sagebrush; Bakeoven soil—Sandberg bluegrass and stiff sagebrush

Interpretive Groups

Capability classification: VIIs, nonirrigated
Range site: Gem soil—Loamy, 12- to 16-inch precipitation zone; Bakeoven soil—Very Shallow, 12- to 20-inch precipitation zone

72—Gem-Bakeoven complex, 30 to 60 percent slopes

Composition

Gem soil and similar inclusions—50 percent
Bakeoven soil and similar inclusions—35 percent
Contrasting inclusions—15 percent

Setting

Landform: Foothills and mountains
Elevation: 3,500 to 4,800 feet

Characteristics of the Gem Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—12 to 16 inches
Air temperature—47 to 50 degrees F
Length of growing season—130 to 140 days
Typical profile:
0 to 10 inches—grayish brown very stony clay loam
10 to 14 inches—grayish brown gravelly clay loam
14 to 29 inches—brown clay
29 inches—basalt
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low
Restriction to rooting depth: Bedrock at a depth of 20 to 40 inches
Runoff: Very rapid
Hazard of erosion by water: Very severe

Characteristics of the Bakeoven Soil

Position on landscape: Side slopes and crests
Climatic data (average annual):
Precipitation—12 to 16 inches
Air temperature—47 to 50 degrees F
Length of growing season—130 to 140 days
Typical profile:
0 to 3 inches—grayish brown extremely stony loam
3 to 5 inches—brown very cobbly loam
5 to 9 inches—brown very gravelly clay loam
9 inches—basalt
Depth class: Very shallow
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Very low
Restriction to rooting depth: Bedrock at a depth of 4 to 10 inches
Runoff: Very rapid
Hazard of erosion by water: Very severe

Contrasting Inclusions

- Deshler silty clay loam
- Deterson silt loam
- Gross stony loam
- Reywat very stony loam
- Rock outcrop

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, available water capacity, slope, stones on the surface, depth to bedrock, and hazard of water erosion
Dominant vegetation in potential plant community: Gem soil—bluebunch wheatgrass and xeric big sagebrush; Bakeoven soil—Sandberg bluegrass and stiff sagebrush

Interpretive Groups

Capability classification: VIIs, nonirrigated
Range site: Gem soil—South Slope Loamy, 12- to 16-inch precipitation zone; Bakeoven soil—Very Shallow, 12- to 20-inch precipitation zone

73—Gem-Reywat complex, 2 to 30 percent slopes

Composition

Gem soil and similar inclusions—50 percent
Reywat soil and similar inclusions—35 percent
Contrasting inclusions—15 percent

Setting

Landform: Foothills and mountains
Elevation: 3,000 to 4,500 feet

Characteristics of the Gem Soil

Position on landscape: Side slopes and shoulders
Climatic data (average annual):
Precipitation—12 to 14 inches
Air temperature—46 to 49 degrees F
Length of growing season—130 to 140 days
Typical profile:
0 to 10 inches—grayish brown very stony clay loam

Figure 4.—Typical area of Gem-Reywat complex, 2 to 30 percent slopes, used as rangeland.

10 to 14 inches—grayish brown gravelly clay loam
14 to 29 inches—brown clay
29 inches—basalt
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low
Restriction to rooting depth: Bedrock at a depth of 20 to 40 inches
Runoff: Medium or rapid
Hazard of erosion by water: Moderate or severe

Characteristics of the Reywat Soil

Position on landscape: Side slopes, shoulders, and summits
Climatic data (average annual):
Precipitation—12 to 14 inches
Air temperature—46 to 49 degrees F
Length of growing season—130 to 140 days
Typical profile:
0 to 6 inches—grayish brown very stony loam
6 to 19 inches—brown very gravelly clay loam
19 inches—basalt
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Very low
Restriction to rooting depth: Bedrock at a depth of 10 to 20 inches
Runoff: Medium or rapid
Hazard of erosion by water: Moderate or severe

Contrasting Inclusions

- Agerdelly clay
- Bakeoven extremely stony loam
- Deshler silty clay loam
- Newell clay loam

Use and Management

Major use: Rangeland (fig. 4)
Major management factors: Low precipitation, stones on the surface, available water capacity, depth to bedrock, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and xeric big sagebrush

Interpretive Groups

Capability classification: VIIs, nonirrigated
Range site: Gem soil—Loamy, 12- to 16-inch precipitation zone; Reywat soil—Shallow Stony Loam, 12- to 16-inch precipitation zone

74—Gem-Reywat complex, 30 to 65 percent slopes

Composition

Gem soil and similar inclusions—55 percent
Reywat soil and similar inclusions—35 percent
Contrasting inclusions—10 percent

Setting

Landform: Foothills and mountains
Elevation: 3,000 to 4,500 feet

Characteristics of the Gem Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—12 to 14 inches
Air temperature—46 to 49 degrees F
Length of growing season—130 to 140 days
Typical profile:
0 to 10 inches—grayish brown very stony clay loam
10 to 14 inches—grayish brown gravelly clay loam
14 to 29 inches—brown clay
29 inches—basalt
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low
Restriction to rooting depth: Bedrock at a depth of 20 to 40 inches
Runoff: Very rapid
Hazard of erosion by water: Severe or very severe

Characteristics of the Reywat Soil

Position on landscape: Side slopes and crests
Climatic data (average annual):
Precipitation—12 to 14 inches
Air temperature—46 to 49 degrees F
Length of growing season—130 to 140 days
Typical profile:
0 to 6 inches—grayish brown very stony loam
6 to 19 inches—brown very gravelly clay loam
19 inches—basalt
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Very low
Restriction to rooting depth: Bedrock at a depth of 10 to 20 inches
Runoff: Very rapid
Hazard of erosion by water: Severe or very severe

Contrasting Inclusions

- Agerdelly clay
- Bakeoven extremely stony loam
- Gross loam

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, stones on the surface, depth to bedrock, available water capacity, slope, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and xeric big sagebrush

Interpretive Groups

Capability classification: VIIs, nonirrigated
Range site: Gem soil—South Slope Loamy, 12- to 16-inch precipitation zone; Reywat soil—Shallow South Stony, 12- to 16-inch precipitation zone

75—Gestrin loam, 2 to 4 percent slopes

Composition

Gestrin soil and similar inclusions—85 percent
Contrasting inclusions—15 percent

Setting

Landform: Stream terraces
Elevation: 3,800 to 4,800 feet

Characteristics of the Gestrin Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—22 to 24 inches
Air temperature—36 to 41 degrees F
Length of growing season—60 to 70 days

Typical profile:
0 to 17 inches—gray loam
17 to 28 inches—dark grayish brown loam
28 to 33 inches—brown and light yellowish brown loam
33 to 42 inches—brown gravelly loam
42 to 60 inches—brown very gravelly sandy loam
Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderate
Available water capacity: Moderate
Restriction to rooting depth: Water table at a depth of 36 to 48 inches
Runoff: Slow
Hazard of erosion by water: Moderate
Depth to water table: 36 to 48 inches in April through July
Frequency of flooding: Rare

Contrasting Inclusions

- Blackwell clay loam
- Donnel sandy loam
- Roseberry loam

Use and Management

Major use: Nonirrigated cropland
Major management factor: Short growing season

Interpretive Groups

Capability classification: IVc, nonirrigated

76—Gestrin loam, 4 to 8 percent slopes

Composition

Gestrin soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Alluvial fans and stream terraces
Elevation: 3,800 to 4,800 feet

Characteristics of the Gestrin Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—22 to 24 inches
Air temperature—36 to 41 degrees F
Length of growing season—60 to 70 days
Typical profile:
0 to 17 inches—gray loam
17 to 28 inches—dark grayish brown loam
28 to 33 inches—brown and light yellowish brown loam
33 to 42 inches—brown gravelly loam
42 to 60 inches—brown very gravelly sandy loam
Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderate
Available water capacity: Moderate
Restriction to rooting depth: Water table at a depth of 36 to 48 inches
Runoff: Medium
Hazard of erosion by water: Moderate
Depth to water table: 36 to 48 inches in April through July
Frequency of flooding: Rare

Contrasting Inclusions

- Blackwell clay loam
- Swede loam

Use and Management

Major uses: Hayland and pastureland
Major management factor: Short growing season

Interpretive Groups

Capability classification: IVe, nonirrigated

77—Glasgow clay loam, 2 to 4 percent slopes

Composition

Glasgow soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Foothills
Elevation: 2,300 to 3,000 feet

Characteristics of the Glasgow Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—48 to 52 degrees F
Length of growing season—135 to 145 days
Typical profile:
0 to 13 inches—light brownish gray clay loam
13 to 17 inches—brown clay
17 to 25 inches—pale brown clay
25 to 38 inches—very pale brown clay loam
38 inches—volcanic tuff
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Moderate

Restriction to rooting depth: Tuff at a depth of 20 to 40 inches
Runoff: Slow
Hazard of erosion by water: Slight

Contrasting Inclusions

- Agerdelly clay
- Deshler silty clay loam
- Newell clay loam
- Power silt loam
- Soils that are 10 to 20 inches deep to tuff

Use and Management

Major use: Irrigated cropland
Major management factors: None

Interpretive Groups

Capability classification: IIIe, irrigated

78—Glasgow clay loam, 8 to 20 percent slopes

Composition

Glasgow soil and similar inclusions—85 percent
Contrasting inclusions—15 percent

Setting

Landform: Foothills
Elevation: 2,300 to 3,000 feet

Characteristics of the Glasgow Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—48 to 52 degrees F
Length of growing season—135 to 145 days
Typical profile:
0 to 13 inches—light brownish gray clay loam
13 to 17 inches—brown clay
17 to 25 inches—pale brown clay
25 to 38 inches—very pale brown clay loam
38 inches—volcanic tuff
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Moderate
Restriction to rooting depth: Tuff at a depth of 20 to 40 inches
Runoff: Medium
Hazard of erosion by water: Slight or moderate

Contrasting Inclusions

- Agerdelly clay
- Bissell clay loam
- Deshler silty clay loam
- Payette coarse sandy loam
- Soils that are 10 to 20 inches deep to tuff

Use and Management

Major uses: Rangeland, pastureland, and hayland
Major management factors: Low precipitation, slope, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and Wyoming big sagebrush

Interpretive Groups

Capability classification: IVe, nonirrigated
Range site: Loamy, 10- to 12-inch precipitation zone

79—Glasgow clay loam, 20 to 60 percent slopes

Composition

Glasgow soil and similar inclusions—85 percent
Contrasting inclusions—15 percent

Setting

Landform: Foothills
Elevation: 2,300 to 3,000 feet

Characteristics of the Glasgow Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—47 to 52 degrees F
Length of growing season—135 to 145 days
Typical profile:
0 to 13 inches—light brownish gray clay loam
13 to 17 inches—brown clay
17 to 25 inches—pale brown clay
25 to 38 inches—very pale brown clay loam
38 inches—volcanic tuff
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Moderate
Restriction to rooting depth: Tuff at a depth of 20 to 40 inches
Runoff: Rapid or very rapid
Hazard of erosion by water: Very severe

Contrasting Inclusions

- Agerdelly clay
- Bakeoven extremely stony loam
- Lankbush sandy loam
- Reywat very stony loam
- Soils that are 10 to 20 inches deep to tuff

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, slope, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and Wyoming big sagebrush

Interpretive Groups

Capability classification: VIIe, nonirrigated
Range site: South Slope Loamy, 10- to 12-inch precipitation zone

80—Glasgow-Lankbush complex, 12 to 30 percent slopes

Composition

Glasgow soil and similar inclusions—55 percent
Lankbush soil and similar inclusions—40 percent
Contrasting inclusions—5 percent

Setting

Landform: Foothills and dissected lacustrine terraces
Elevation: 2,300 to 3,500 feet

Characteristics of the Glasgow Soil

Position on landscape: Side slopes and shoulders
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 51 degrees F
Length of growing season—120 to 140 days
Typical profile:
0 to 13 inches—light brownish gray clay loam
13 to 17 inches—brown clay
17 to 25 inches—pale brown clay
25 to 38 inches—very pale brown clay loam
38 inches—volcanic tuff
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Moderate
Restriction to rooting depth: Tuff at a depth of 20 to 40 inches
Runoff: Medium or rapid
Hazard of erosion by water: Moderate or severe

Characteristics of the Lankbush Soil

Position on landscape: Side slopes and foot slopes
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 51 degrees F
Length of growing season—120 to 140 days
Typical profile:
0 to 12 inches—light brownish gray sandy loam
12 to 43 inches—light yellowish brown sandy clay loam
43 to 60 inches—light yellowish brown sand
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Runoff: Medium or rapid
Hazard of erosion by water: Moderate or severe

Contrasting Inclusions

- Agerdelly clay
- Deshler silty clay loam
- Lanktree loam

Use and Management

Major uses: Nonirrigated cropland and rangeland
Major management factors: Low precipitation, slope, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and Wyoming big sagebrush

Interpretive Groups

Capability classification: IVe, nonirrigated
Range site: Loamy, 10- to 12-inch precipitation zone

81—Glasgow-Lankbush complex, 30 to 60 percent slopes

Composition

Glasgow soil and similar inclusions—60 percent
Lankbush soil and similar inclusions—30 percent
Contrasting inclusions—10 percent

Setting

Landform: Foothills and dissected lacustrine terraces
Elevation: 2,300 to 3,500 feet

Characteristics of the Glasgow Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 51 degrees F

Length of growing season—120 to 140 days
Typical profile:
0 to 13 inches—light brownish gray clay loam
13 to 17 inches—brown clay
17 to 25 inches—pale brown clay
25 to 38 inches—very pale brown clay loam
38 inches—volcanic tuff
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Moderate
Restriction to rooting depth: Tuff at a depth of 20 to 40 inches
Runoff: Rapid or very rapid
Hazard of erosion by water: Very severe

Characteristics of the Lankbush Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 51 degrees F
Length of growing season—120 to 140 days
Typical profile:
0 to 12 inches—light brownish gray sandy loam
12 to 43 inches—light yellowish brown sandy clay loam
43 to 60 inches—light yellowish brown sand
Depth class: Very deep
Drainage class: Well drained

Figure 5.—Irrigated grass-legume hay in an area of Greenleaf silt loam, 0 to 2 percent slopes, in foreground. Agerdelly soils on dissected lacustrine terraces in background.

Permeability: Moderately slow
Available water capacity: Moderate
Runoff: Rapid or very rapid
Hazard of erosion by water: Very severe

Contrasting Inclusions

- Deshler silty clay loam
- Deterson silt loam
- Lanktree loam
- Lolalita sandy loam
- Tindahay loamy coarse sand

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, slope, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and Wyoming big sagebrush

Interpretive Groups

Capability classification: VIIe, nonirrigated
Range site: South Slope Loamy, 10- to 12-inch precipitation zone

82—Greenleaf silt loam, 0 to 2 percent slopes

Composition

Greenleaf soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Fan terraces
Elevation: 2,100 to 2,400 feet

Characteristics of the Greenleaf Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 52 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 9 inches—light brownish gray silt loam
9 to 12 inches—pale brown silt loam
12 to 21 inches—grayish brown silty clay loam
21 to 38 inches—very pale brown silt loam
38 to 60 inches—light gray silt
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: High
Runoff: Slow
Hazard of erosion by water: Slight

Contrasting Inclusions

- Abo silt loam
- Nyssaton silt loam
- Owyhee silt loam

Use and Management

Major use: Irrigated cropland (fig. 5)
Major management factors: None

Interpretive Groups

Capability classification: I, irrigated

83—Greenleaf silt loam, 2 to 4 percent slopes

Composition

Greenleaf soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Fan terraces
Elevation: 2,100 to 2,400 feet

Characteristics of the Greenleaf Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 52 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 9 inches—light brownish gray silt loam
9 to 12 inches—pale brown silt loam
12 to 21 inches—grayish brown silty clay loam
21 to 38 inches—very pale brown silt loam
38 to 60 inches—light gray silt
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: High
Runoff: Slow
Hazard of erosion by water: Slight

Contrasting Inclusions

- Nyssaton silt loam
- Owyhee silt loam

Use and Management

Major use: Irrigated cropland
Major management factors: None

Interpretive Groups

Capability classification: IIe, irrigated

84—Greenleaf silt loam, 4 to 8 percent slopes

Composition

Greenleaf soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Fan terraces
Elevation: 2,100 to 2,400 feet

Characteristics of the Greenleaf Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 52 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 9 inches—light brownish gray silt loam
9 to 12 inches—pale brown silt loam
12 to 21 inches—grayish brown silty clay loam
21 to 38 inches—very pale brown silt loam
38 to 60 inches—light gray silt
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: High
Runoff: Medium
Hazard of erosion by water: Slight

Contrasting Inclusions

- Nyssaton silt loam
- Owyhee silt loam

Use and Management

Major use: Irrigated cropland
Major management factor: Slope

Interpretive Groups

Capability classification: IIIe, irrigated

85—Greenleaf silt loam, 8 to 12 percent slopes

Composition

Greenleaf soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Fan terraces
Elevation: 2,100 to 2,400 feet

Characteristics of the Greenleaf Soil

Position on landscape: Summits and side slopes
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 52 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 9 inches—light brownish gray silt loam
9 to 12 inches—pale brown silt loam
12 to 21 inches—grayish brown silty clay loam
21 to 38 inches—very pale brown silt loam
38 to 60 inches—light gray silt
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: High
Runoff: Medium
Hazard of erosion by water: Moderate

Contrasting Inclusions

- Nyssaton silt loam
- Owyhee silt loam
- Soils that have slopes of more than 12 percent

Use and Management

Major use: Irrigated cropland
Major management factors: Slope and hazard of water erosion

Interpretive Groups

Capability classification: IVe, irrigated

86—Gross loam, 30 to 65 percent slopes

Composition

Gross soil and similar inclusions—85 percent
Contrasting inclusions—15 percent

Setting

Landform: Mountains
Elevation: 3,400 to 4,000 feet

Characteristics of the Gross Soil

Position on landscape: North-facing side slopes
Climatic data (average annual):
Precipitation—12 to 16 inches
Air temperature—42 to 45 degrees F
Length of growing season—120 to 130 days

Figure 6.—Typical area of Gross-Bakeoven complex, 30 to 65 percent slopes, on north-facing side slopes in foreground. Bakeoven-Reywat-Rock outcrop complex, 30 to 60 percent slopes, across the canyon in background, on south-facing side slopes.

Typical profile:
0 to 18 inches—dark grayish brown loam
18 to 30 inches—dark brown loam
30 to 38 inches—dark brown cobbly clay loam
38 inches—basalt
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Restriction to rooting depth: Bedrock at a depth of 20 to 40 inches
Runoff: Very rapid
Hazard of erosion by water: Very severe

Contrasting Inclusions

- Bakeoven extremely stony loam
- Reywat very stony loam
- Gem stony loam

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, slope, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and xeric big sagebrush

Interpretive Groups

Capability classification: VIIe, nonirrigated
Range site: North Slope Loamy, 12- to 16-inch precipitation zone

87—Gross silt loam, 30 to 65 percent slopes

Composition

Gross soil and similar inclusions—80 percent
Contrasting inclusions—20 percent

Setting

Landform: Mountains
Elevation: 2,400 to 4,000 feet

Characteristics of the Gross Soil

Position on landscape: North-facing side slopes
Climatic data (average annual):
Precipitation—12 to 16 inches
Air temperature—42 to 45 degrees F
Length of growing season—120 to 130 days
Typical profile:
0 to 18 inches—dark grayish brown silt loam
18 to 30 inches—dark brown loam
30 to 38 inches—dark brown cobbly clay loam
38 inches—basalt
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Restriction to rooting depth: Bedrock at a depth of 20 to 40 inches
Runoff: Very rapid
Hazard of erosion by water: Severe or very severe

Contrasting Inclusions

- Bakeoven extremely stony loam
- Deterson silt loam
- Oldsferry shaly loam
- Reywat very stony loam
- Soils that are 15 to 35 percent pebbles
- Warmer soils that are along the Snake River

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, slope, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and Idaho fescue

Interpretive Groups

Capability classification: VIIe, nonirrigated
Range site: North Slope Loamy, 12- to 16-inch precipitation zone

88—Gross-Bakeoven complex, 30 to 65 percent slopes

Composition

Gross soil and similar inclusions—60 percent
Bakeoven soil and similar inclusions—20 percent
Contrasting inclusions—20 percent

Setting

Landform: Mountains (fig. 6)
Elevation: 2,400 to 4,000 feet

Characteristics of the Gross Soil

Position on landscape: North-facing side slopes
Climatic data (average annual):
Precipitation—12 to 16 inches
Air temperature—42 to 45 degrees F
Length of growing season—120 to 130 days
Typical profile:
0 to 18 inches—dark grayish brown silt loam
18 to 30 inches—dark brown loam
30 to 38 inches—dark brown cobbly clay loam
38 inches—basalt
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Restriction to rooting depth: Bedrock at a depth of 20 to 40 inches
Runoff: Very rapid
Hazard of erosion by water: Severe or very severe

Characteristics of the Bakeoven Soil

Position on landscape: Crests and south-facing side slopes
Climatic data (average annual):
Precipitation—12 to 16 inches
Air temperature—47 to 51 degrees F
Length of growing season—120 to 130 days

Typical profile:
0 to 3 inches—grayish brown extremely stony loam
3 to 5 inches—brown very cobbly loam
5 to 9 inches—brown very gravelly clay loam
9 inches—basalt
Depth class: Very shallow
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Very low
Restriction to rooting depth: Bedrock at a depth of 4 to 10 inches
Runoff: Very rapid
Hazard of erosion by water: Very severe

Contrasting Inclusions

- Deterson silt loam
- Gem very stony loam
- Reywat very stony loam
- Soils that are more than 35 percent rock fragments
- Rock outcrop
- Warmer soils that are along the Snake River

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, slope, stones on the surface, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Gross soil—bluebunch wheatgrass and Idaho fescue; Bakeoven soil—Sandberg bluegrass and stiff sagebrush

Interpretive Groups

Capability classification: VIIe, nonirrigated
Range site: Gross soil—North Slope Loamy, 12- to 16-inch precipitation zone; Bakeoven soil—Very Shallow, 12- to 20-inch precipitation zone

89—Gross-Bakeoven complex, 30 to 65 percent slopes, stony

Composition

Gross soil and similar inclusions—50 percent
Bakeoven soil and similar inclusions—35 percent
Contrasting inclusions—15 percent

Setting

Landform: Mountains
Elevation: 3,400 to 4,000 feet

Characteristics of the Gross Soil

Position on landscape: North-facing side slopes
Climatic data (average annual):
Precipitation—12 to 16 inches
Air temperature—42 to 45 degrees F
Length of growing season—120 to 130 days
Typical profile:
0 to 18 inches—dark grayish brown stony loam
18 to 30 inches—dark brown loam
30 to 38 inches—dark brown cobbly clay loam
38 inches—basalt
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Restriction to rooting depth: Bedrock at a depth of 20 to 40 inches
Runoff: Very rapid
Hazard of erosion by water: Very severe

Characteristics of the Bakeoven Soil

Position on landscape: South-facing side slopes and crests
Climatic data (average annual):
Precipitation—12 to 16 inches
Air temperature—47 to 51 degrees F
Length of growing season—120 to 130 days
Typical profile:
0 to 3 inches—grayish brown extremely stony loam
3 to 5 inches—brown very cobbly loam
5 to 9 inches—brown very gravelly clay loam
9 inches—basalt
Depth class: Very shallow
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Very low
Restriction to rooting depth: Bedrock at a depth of 4 to 10 inches
Runoff: Very rapid
Hazard of erosion by water: Very severe

Contrasting Inclusions

- Gem very stony loam
- Reywat very stony loam

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, slope, stones on the surface, depth to bedrock, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Gross soil—bluebunch wheatgrass and xeric big sagebrush; Bakeoven soil—Sandberg bluegrass and stiff sagebrush

Interpretive Groups

Capability classification: VIIe, nonirrigated
Range site: Gross soil—North Slope Loamy, 12- to 16-inch precipitation zone; Bakeoven soil—Very Shallow, 12- to 20-inch precipitation zone

90—Gwin-Rock outcrop complex, 40 to 65 percent slopes

Composition

Gwin soil and similar inclusions—40 percent
Rock outcrop—40 percent
Contrasting inclusions—20 percent

Setting

Landform: Canyons
Elevation: 1,900 to 4,500 feet

Characteristics of the Gwin Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—16 to 20 inches
Air temperature—45 to 48 degrees F
Length of growing season—120 to 140 days
Typical profile:
0 to 5 inches—brown very stony loam
5 to 12 inches—brown extremely cobbly loam
12 to 20 inches—brown extremely cobbly clay loam
20 inches—basalt
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Very low
Restriction to rooting depth: Bedrock at a depth of 10 to 20 inches
Runoff: Very rapid
Hazard of erosion by water: Severe or very severe

Characteristics of the Rock Outcrop

Position on landscape: Steep side slopes and cliffs
Kind of rock: Exposed, hard basalt
Vegetation: None, except in fractures

Contrasting Inclusions

- McDaniel very stony loam
- Rockly very stony loam

Use and Management

Major use: Rangeland
Major management factors: Slope, stones on the surface, depth to bedrock, available water capacity, hazard of water erosion, and areas of Rock outcrop
Dominant vegetation in potential plant community: Bluebunch wheatgrass and Sandberg bluegrass

Interpretive Groups

Capability classification: VIIs, nonirrigated
Range site: Gwin soil—Shallow South Stony, 14- to 18-inch precipitation zone

91—Harpt loam, 2 to 4 percent slopes

Composition

Harpt soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Alluvial fans
Elevation: 2,200 to 2,500 feet

Characteristics of the Harpt Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 52 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 23 inches—grayish brown loam
23 to 40 inches—brown loam
40 to 60 inches—very pale brown coarse sandy loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High
Runoff: Slow
Hazard of erosion by water: Slight

Contrasting Inclusions

- Cashmere sandy loam
- Deshler silty clay loam
- Moulton fine sandy loam
- Newell clay loam
- Tindahay loamy coarse sand

Use and Management

Major use: Nonirrigated cropland
Major management factor: Low precipitation

Interpretive Groups

Capability classification: VIc, nonirrigated

92—Harpt loam, 4 to 8 percent slopes

Composition

Harpt soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Alluvial fans
Elevation: 2,200 to 2,500 feet

Characteristics of the Harpt Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 52 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 23 inches—grayish brown loam
23 to 40 inches—brown loam
40 to 60 inches—very pale brown coarse sandy loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High
Runoff: Medium
Hazard of erosion by water: Slight

Contrasting Inclusions

- Cashmere sandy loam
- Onyx silt loam
- Shoepeg loam
- Tindahay loamy coarse sand

Use and Management

Major use: Nonirrigated cropland
Major management factor: Low precipitation

Interpretive Groups

Capability classification: VIe, nonirrigated

93—Haw silt loam, 4 to 8 percent slopes

Composition

Haw soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Lacustrine terraces
Elevation: 2,300 to 2,700 feet

Characteristics of the Haw Soil

Position on landscape: Summits and shoulders
Climatic data (average annual):
Precipitation—12 to 13 inches
Air temperature—48 to 51 degrees F
Length of growing season—145 to 155 days
Typical profile:
0 to 17 inches—grayish brown silt loam
17 to 26 inches—brown clay loam
26 to 38 inches—pale brown clay loam
38 to 60 inches—very pale brown coarse sandy loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Runoff: Medium
Hazard of erosion by water: Slight

Contrasting Inclusions

- Dishner very stony silty clay loam
- Payette coarse sandy loam
- Power silt loam

Use and Management

Major uses: Rangeland and nonirrigated cropland
Major management factor: Low precipitation
Dominant vegetation in potential plant community:
Bluebunch wheatgrass and xeric big sagebrush

Interpretive Groups

Capability classification: VIe, nonirrigated
Range site: Loamy, 12- to 16-inch precipitation zone

94—Haw silt loam, 8 to 12 percent slopes

Composition

Haw soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Lacustrine terraces
Elevation: 2,300 to 2,700 feet

Characteristics of the Haw Soil

Position on landscape: Side slopes and shoulders
Climatic data (average annual):
Precipitation—12 to 13 inches
Air temperature—48 to 51 degrees F
Length of growing season—145 to 155 days

Typical profile:
0 to 17 inches—grayish brown silt loam
17 to 26 inches—brown clay loam
26 to 38 inches—pale brown clay loam
38 to 60 inches—very pale brown coarse sandy loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Runoff: Medium
Hazard of erosion by water: Slight or moderate

Contrasting Inclusions

- Dishner very stony silty clay loam
- Payette coarse sandy loam
- Power silt loam

Use and Management

Major uses: Rangeland and nonirrigated cropland
Major management factors: Low precipitation and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and xeric big sagebrush

Interpretive Groups

Capability classification: VIe, nonirrigated
Range site: Loamy, 12- to 16-inch precipitation zone

95—Haw silt loam, 12 to 30 percent slopes

Composition

Haw soil and similar inclusions—85 percent
Contrasting inclusions—15 percent

Setting

Landform: Dissected lacustrine terraces
Elevation: 2,300 to 2,700 feet

Characteristics of the Haw Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—12 to 13 inches
Air temperature—48 to 51 degrees F
Length of growing season—145 to 155 days
Typical profile:
0 to 17 inches—grayish brown silt loam
17 to 26 inches—brown clay loam
26 to 38 inches—pale brown clay loam
38 to 60 inches—very pale brown coarse sandy loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Runoff: Medium
Hazard of erosion by water: Moderate or severe

Contrasting Inclusions

- Deshler silty clay loam
- Dishner very stony silty clay loam
- Payette coarse sandy loam
- Van Dusen loam

Use and Management

Major use: Rangeland
Major management factors: Low precipitation and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and xeric big sagebrush

Interpretive Groups

Capability classification: VIe, nonirrigated
Range site: Loamy, 12- to 16-inch precipitation zone

96—Haw silt loam, 30 to 60 percent slopes

Composition

Haw soil and similar inclusions—85 percent
Contrasting inclusions—15 percent

Setting

Landform: Dissected lacustrine terraces
Elevation: 2,300 to 2,700 feet

Characteristics of the Haw Soil

Position on landscape: South-facing side slopes
Climatic data (average annual):
Precipitation—12 to 13 inches
Air temperature—48 to 51 degrees F
Length of growing season—145 to 155 days
Typical profile:
0 to 17 inches—grayish brown silt loam
17 to 26 inches—brown clay loam
26 to 38 inches—pale brown clay loam
38 to 60 inches—very pale brown coarse sandy loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Runoff: Very rapid
Hazard of erosion by water: Very severe

Contrasting Inclusions

- Deshler silty clay loam

- Dishner very stony silty clay loam
- Payette coarse sandy loam
- Van Dusen loam

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, slope, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and xeric big sagebrush

Interpretive Groups

Capability classification: VIIe, nonirrigated
Range site: Loamy, 12- to 16-inch precipitation zone

97—Jacknife loam, 1 to 4 percent slopes

Composition

Jacknife soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Fan terraces
Elevation: 3,100 to 4,500 feet

Characteristics of the Jacknife Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—18 to 22 inches
Air temperature—45 to 50 degrees F
Length of growing season—110 to 140 days
Typical profile:
0 to 5 inches—dark gray loam
5 to 13 inches—dark grayish brown loam
13 to 23 inches—brown clay loam
23 to 41 inches—brown clay
41 to 60 inches—brown cobbly clay loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: High
Runoff: Slow
Hazard of erosion by water: Slight

Contrasting Inclusions

- Meland silt loam
- Newell clay loam

Use and Management

Major uses: Nonirrigated cropland and rangeland
Major management factors: None
Dominant vegetation in potential plant community: Idaho fescue and antelope bitterbrush

Interpretive Groups

Capability classification: IIc, nonirrigated
Range site: Loamy, 16- to 20-inch precipitation zone

98—Jacknife loam, 4 to 8 percent slopes

Composition

Jacknife soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Fan terraces
Elevation: 3,100 to 4,500 feet

Characteristics of the Jacknife Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—18 to 22 inches
Air temperature—45 to 50 degrees F
Length of growing season—110 to 140 days
Typical profile:
0 to 5 inches—dark gray loam
5 to 13 inches—dark grayish brown loam
13 to 23 inches—brown clay loam
23 to 41 inches—brown clay
41 to 60 inches—brown cobbly clay loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: High
Runoff: Medium
Hazard of erosion by water: Slight

Contrasting Inclusions

- Demasters loam
- Meland silt loam
- Newell clay loam
- Riggins extremely stony loam

Use and Management

Major uses: Nonirrigated cropland and rangeland

Major management factors: None
Dominant vegetation in potential plant community:
Idaho fescue and antelope bitterbrush

Interpretive Groups

Capability classification: IIe, nonirrigated
Range site: Loamy, 16- to 20-inch precipitation zone

99—Jacknife loam, 8 to 12 percent slopes

Composition

Jacknife soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Fan terraces
Elevation: 3,100 to 4,500 feet

Characteristics of the Jacknife Soil

Position on landscape: Summits and shoulders
Climatic data (average annual):
Precipitation—18 to 22 inches
Air temperature—45 to 50 degrees F
Length of growing season—110 to 140 days
Typical profile:
0 to 5 inches—dark gray loam
5 to 13 inches—dark grayish brown loam
13 to 23 inches—brown clay loam
23 to 41 inches—brown clay
41 to 60 inches—brown cobbly clay loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: High
Runoff: Medium
Hazard of erosion by water: Slight or moderate

Contrasting Inclusions

- Demasters loam
- Meland silt loam
- Newell clay loam
- Riggins extremely stony loam

Use and Management

Major uses: Nonirrigated cropland and rangeland
Major management factor: Hazard of water erosion
Dominant vegetation in potential plant community:
Idaho fescue and antelope bitterbrush

Interpretive Groups

Capability classification: IVe, nonirrigated
Range site: Loamy, 16- to 20-inch precipitation zone

100—Jacknife loam, 12 to 30 percent slopes

Composition

Jacknife soil and similar inclusions—85 percent
Contrasting inclusions—15 percent

Setting

Landform: Mountains
Elevation: 3,100 to 4,500 feet

Characteristics of the Jacknife Soil

Position on landscape: Foot slopes and side slopes
Climatic data (average annual):
Precipitation—18 to 22 inches
Air temperature—45 to 50 degrees F
Length of growing season—110 to 140 days
Typical profile:
0 to 5 inches—dark gray loam
5 to 13 inches—dark grayish brown loam
13 to 23 inches—brown clay loam
23 to 41 inches—brown clay
41 to 60 inches—brown cobbly clay loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: High
Runoff: Medium or rapid
Hazard of erosion by water: Moderate or severe

Contrasting Inclusions

- Demasters loam
- Meland silt loam
- Newell clay loam
- Riggins extremely stony loam

Use and Management

Major uses: Nonirrigated cropland and rangeland
Major management factors: Slope and hazard of water erosion

Dominant vegetation in potential plant community: Idaho fescue and antelope bitterbrush

Interpretive Groups

Capability classification: IVe, nonirrigated
Range site: Loamy, 16- to 20-inch precipitation zone

101—Jacknife very stony loam, 4 to 30 percent slopes

Composition

Jacknife soil and similar inclusions—85 percent
Contrasting inclusions—15 percent

Setting

Landform: Mountains
Elevation: 3,100 to 4,500 feet

Characteristics of the Jacknife Soil

Position on landscape: Foot slopes and side slopes
Climatic data (average annual):
Precipitation—18 to 22 inches
Air temperature—45 to 50 degrees F
Length of growing season—110 to 140 days
Typical profile:
0 to 5 inches—dark gray very stony loam
5 to 13 inches—dark grayish brown very stony loam
13 to 33 inches—brown cobbly clay loam
33 to 41 inches—brown cobbly clay
41 to 60 inches—brown cobbly clay loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Moderate
Runoff: Medium or rapid
Hazard of erosion by water: Moderate or severe

Contrasting Inclusions

- Langrell loam
- Meland silt loam
- Riggins extremely stony loam

Use and Management

Major use: Rangeland
Major management factors: Stones on the surface and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and basin big sagebrush

Interpretive Groups

Capability classification: VIs, nonirrigated
Range site: Stony Loam, 16- to 22-inch precipitation zone

102—Jenny clay, 0 to 2 percent slopes

Composition

Jenny soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Stream terraces
Elevation: 2,100 to 2,300 feet

Characteristics of the Jenny Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—12 to 14 inches
Air temperature—48 to 52 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 29 inches—grayish brown clay
29 to 38 inches—grayish brown clay
38 to 49 inches—brown silt loam
49 to 60 inches—grayish brown silt loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Moderate
Runoff: Slow
Hazard of erosion by water: Slight

Contrasting Inclusions

- Bissell clay loam
- Greenleaf silt loam

Use and Management

Major use: Irrigated cropland
Major management factors: None

Interpretive Groups

Capability classification: IIIs, irrigated

103—Johnson coarse sandy loam, 30 to 65 percent slopes

Composition

Johnson soil and similar inclusions—85 percent
Contrasting inclusions—15 percent

Setting

Landform: Mountains
Elevation: 3,700 to 3,900 feet

Characteristics of the Johnson Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—22 to 26 inches
Air temperature—43 to 45 degrees F
Length of growing season—90 to 110 days
Typical profile:
1 inch to 0—decomposed organic matter
0 to 7 inches—grayish brown coarse sandy loam
7 to 20 inches—brown coarse sandy loam
20 to 42 inches—yellowish brown clay loam
42 inches—weathered granite
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Low
Restriction to rooting depth: Bedrock at a depth of 40 to 60 inches
Runoff: Very rapid
Hazard of erosion by water: Very severe

Contrasting Inclusions

- Moonstone coarse sandy loam
- Rock outcrop

Use and Management

Major use: Woodland
Major management factors: Slope, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Ponderosa pine, Idaho fescue, and common snowberry
Mean site index for stated species: Ponderosa pine—85
Estimated average annual production per acre: Ponderosa pine—3,075 cubic feet of timber 0.6 inch in diameter or more at 40 years of age

Interpretive Groups

Capability classification: VIIe, nonirrigated

104—Jughandle sandy loam, 30 to 60 percent slopes

Composition

Jughandle soil and similar inclusions—85 percent
Contrasting inclusions—15 percent

Setting

Landform: Mountains
Elevation: 4,000 to 5,200 feet

Characteristics of the Jughandle Soil

Position on landscape: North-facing side slopes
Climatic data (average annual):
Precipitation—30 to 38 inches
Air temperature—36 to 42 degrees F
Length of growing season—30 to 70 days
Typical profile:
3 inches to 0—decomposed organic matter
0 to 5 inches—yellowish brown sandy loam
5 to 13 inches—light yellowish brown sandy loam
13 to 29 inches—pale brown coarse sandy loam
29 to 48 inches—very pale brown fine gravelly loamy coarse sand
48 inches—weathered granite
Depth class: Deep
Drainage class: Somewhat excessively drained
Permeability: Moderately rapid
Available water capacity: Low
Restriction to rooting depth: Bedrock at a depth of 40 to 60 inches
Runoff: Very rapid
Hazard of erosion by water: Very severe

Contrasting Inclusions

- Ligget sandy loam
- Suttler loam
- Soils that have more than 35 percent rock fragments

Use and Management

Major use: Woodland
Major management factors: Slope, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Grand fir, Douglas fir, western larch, spruce, pine reedgrass, elk sedge, and common beargrass
Mean site index for stated species: Grand fir—60
Estimated average annual production per acre: Grand fir—8,000 cubic feet of timber 0.6 inch in diameter or more at 80 years of age

Interpretive Groups

Capability classification: VIIe, nonirrigated

105—Jughandle-Suttler association, 40 to 90 percent slopes

Composition

Jughandle soil and similar inclusions—45 percent

Suttler soil and similar inclusions—40 percent
Contrasting inclusions—15 percent

Setting

Landform: Mountains
Elevation: 4,000 to 5,200 feet

Characteristics of the Jughandle Soil

Position on landscape: North-facing side slopes
Climatic data (average annual):
Precipitation—30 to 38 inches
Air temperature—36 to 42 degrees F
Length of growing season—30 to 70 days
Slope range: 40 to 90 percent
Typical profile:
3 inches to 0—decomposed organic matter
0 to 5 inches—yellowish brown sandy loam
5 to 13 inches—light yellowish brown sandy loam
13 to 29 inches—pale brown coarse sandy loam
29 to 48 inches—very pale brown fine gravelly loamy coarse sand
48 inches—weathered granite
Depth class: Deep
Drainage class: Somewhat excessively drained
Permeability: Moderately rapid
Available water capacity: Low
Restriction to rooting depth: Bedrock at a depth of 40 to 60 inches
Runoff: Very rapid
Hazard of erosion by water: Very severe

Characteristics of the Suttler Soil

Position on landscape: South-facing side slopes
Climatic data (average annual):
Precipitation—30 to 36 inches
Air temperature—38 to 44 degrees F
Length of growing season—60 to 80 days
Slope range: 40 to 60 percent
Typical profile:
2 inches to 0—decomposed organic matter
0 to 4 inches—grayish brown loam
4 to 15 inches—brown loam
15 to 45 inches—pale brown fine sandy loam
45 inches—weathered mica schist
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Low
Restriction to rooting depth: Bedrock at a depth of 40 to 60 inches
Runoff: Very rapid
Hazard of erosion by water: Very severe

Contrasting Inclusions

- Shellrock loamy coarse sand
- Klickson silt loam
- Soils that are 20 to 40 inches deep to mica schist
- Rock outcrop

Use and Management

Major use: Woodland
Major management factors: Slope, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Jughandle soil—grand fir, Douglas fir, western larch, spruce, pine reedgrass, elk sedge, and common beargrass; Suttler soil—grand fir, Douglas fir, western larch, ponderosa pine, mallow ninebark, baldhip rose, and creambush oceanspray
Mean site index for stated species: Grand fir—60
Estimated average annual production per acre: Grand fir—9,000 cubic feet of timber 0.6 inch in diameter or more at 80 years of age

Interpretive Groups

Capability classification: VIIe, nonirrigated

106—Kangas coarse sandy loam, 0 to 2 percent slopes

Composition

Kangas soil and similar inclusions—80 percent
Contrasting inclusions—20 percent

Setting

Landform: Fan terraces
Elevation: 3,800 to 3,900 feet

Characteristics of the Kangas Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—22 to 24 inches
Air temperature—38 to 40 degrees F
Length of growing season—60 to 80 days
Typical profile:
0 to 21 inches—brown coarse sandy loam
21 to 40 inches—pale brown fine gravelly loamy coarse sand
40 to 60 inches—brownish yellow very gravelly coarse sand
Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability: Rapid

Available water capacity: Low
Runoff: Very slow
Hazard of erosion by water: Slight
Frequency of flooding: Rare

Contrasting Inclusions

- Melton loam
- Soils that are more than 60 percent pebbles

Use and Management

Major uses: Hayland and pastureland
Major management factors: Short growing season and available water capacity

Interpretive Groups

Capability classification: IVs, nonirrigated

107—Klicker stony loam, 30 to 60 percent slopes

Composition

Klicker soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Mountains
Elevation: 3,500 to 4,800 feet

Characteristics of the Klicker Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—26 to 30 inches
Air temperature—43 to 45 degrees F
Length of growing season—70 to 90 days
Typical profile:
1 inch to 0—decomposed organic matter
0 to 17 inches—dark grayish brown stony loam
17 to 34 inches—brown very cobbly clay loam
34 inches—basalt
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Low
Restriction to rooting depth: Bedrock at a depth of 20 to 40 inches
Runoff: Very rapid
Hazard of erosion by water: Severe

Contrasting Inclusions

- Demasters loam
- Meland silt loam
- Riggins extremely stony loam
- 160 acres of soils in sec. 15, T. 14 N., R. 6 W., that are less than 18 percent clay and are 20 to 40 inches deep to granite

Use and Management

Major use: Woodland
Major management factors: Slope, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Douglas fir, ponderosa pine, bluebunch wheatgrass, Oregongrape, and pine reedgrass
Mean site index for stated species: Ponderosa pine—80
Estimated average annual production per acre: Ponderosa pine—2,150 cubic feet of timber 0.6 inch in diameter or more at 40 years of age

Interpretive Groups

Capability classification: VIIe, nonirrigated

108—Klickson silt loam, 30 to 60 percent slopes

Composition

Klickson soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Mountains
Elevation: 3,400 to 4,600 feet

Characteristics of the Klickson Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—28 to 32 inches
Air temperature—42 to 45 degrees F
Length of growing season—70 to 90 days
Typical profile:
1 inch to 0—decomposed organic matter
0 to 8 inches—dark grayish brown silt loam
8 to 17 inches—brown cobbly silt loam
17 to 50 inches—brown very cobbly loam
50 to 60 inches—brown very cobbly clay
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Runoff: Very rapid
Hazard of erosion by water: Severe

Contrasting Inclusions

- Littlesalmon loam
- Riggins extremely stony loam

Use and Management

Major use: Woodland
Major management factors: Slope and hazard of water erosion
Dominant vegetation in potential plant community: Grand fir, Douglas fir, ponderosa pine, huckleberry, princes pine, and pine reedgrass
Mean site index for stated species: Grand fir—70; Douglas fir—100
Estimated average annual production per acre: Grand fir—10,350 cubic feet of timber 0.6 inch in diameter or more at 80 years of age; Douglas fir—4,100 cubic feet of timber 0.6 inch in diameter or more at 40 years of age

Interpretive Groups

Capability classification: VIIe, nonirrigated

109—Klickson-Rock outcrop complex, 40 to 90 percent slopes

Composition

Klickson soil and similar inclusions—45 percent
Rock outcrop—40 percent
Contrasting inclusions—15 percent

Setting

Landform: Mountains
Elevation: 3,400 to 4,600 feet

Characteristics of the Klickson Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—28 to 32 inches
Air temperature—42 to 45 degrees F
Length of growing season—70 to 90 days
Typical profile:
1 inch to 0—decomposed organic matter
0 to 8 inches—dark grayish brown silt loam
8 to 17 inches—brown cobbly silt loam
17 to 50 inches—brown very cobbly loam
50 to 60 inches—brown very cobbly clay
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Runoff: Very rapid
Hazard of erosion by water: Severe

Characteristics of the Rock Outcrop

Position on landscape: Steep side slopes and cliffs
Kind of rock: Exposed, hard basalt
Vegetation: None, except in fractures

Contrasting Inclusions

- Demast loam
- Riggins extremely stony loam
- Soils that are 20 to 40 inches deep to bedrock

Use and Management

Major use: Woodland
Major management factors: Slope, hazard of water erosion, and areas of Rock outcrop
Dominant vegetation in potential plant community: Douglas fir, ponderosa pine, snowberry, ninebark, and pine reedgrass
Mean site index for stated species: Douglas fir—100
Estimated average annual production per acre: Douglas fir—4,100 cubic feet of timber 0.6 inch in diameter or more at 40 years of age

Interpretive Groups

Capability classification: VIIe, nonirrigated

110—Langrell loam, 0 to 2 percent slopes

Composition

Langrell soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Stream terraces
Elevation: 3,000 to 3,400 feet

Characteristics of the Langrell Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—18 to 22 inches
Air temperature—47 to 51 degrees F
Length of growing season—110 to 140 days
Typical profile:
0 to 10 inches—dark grayish brown loam
10 to 24 inches—grayish brown gravelly loam
24 to 30 inches—brown extremely cobbly loam
30 to 60 inches—brown extremely cobbly sandy loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Low
Runoff: Very slow

Hazard of erosion by water: Slight
Frequency of flooding: Rare

Contrasting Inclusions

- Dagor loam
- Soils that are 20 to 35 percent pebbles

Use and Management

Major uses: Woodland, hayland, and pastureland
Major management factor: Available water capacity
Dominant vegetation in potential plant community: Ponderosa pine, common snowberry, brackenfern, and hawthorn
Mean site index for stated species: Ponderosa pine—120
Estimated average annual production per acre: Ponderosa pine—5,650 cubic feet of timber 0.6 inch in diameter or more at 40 years of age

Interpretive Groups

Capability classification: IIIs, nonirrigated

111—Langrell gravelly loam, 0 to 3 percent slopes

Composition

Langrell soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Stream terraces
Elevation: 2,500 to 3,000 feet

Characteristics of the Langrell Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—14 to 18 inches
Air temperature—49 to 51 degrees F
Length of growing season—130 to 160 days
Typical profile:
0 to 10 inches—dark grayish brown gravelly loam
10 to 24 inches—grayish brown gravelly loam
24 to 30 inches—brown extremely cobbly loam
30 to 60 inches—brown extremely cobbly sandy loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Low
Runoff: Very slow
Hazard of erosion by water: Slight
Frequency of flooding: Rare

Contrasting Inclusions

- Soils that are 20 to 35 percent pebbles

Use and Management

Major uses: Rangeland, hayland, and pastureland
Major management factor: Available water capacity
Dominant vegetation in potential plant community: Basin wildrye, bluebunch wheatgrass, and basin big sagebrush with scattered ponderosa pine and Douglas fir

Interpretive Groups

Capability classification: IIIs, nonirrigated
Range site: Loamy Bottom, 8- to 14-inch precipitation zone

112—Lankbush sandy loam, 2 to 4 percent slopes

Composition

Lankbush soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Lacustrine terraces
Elevation: 2,200 to 3,500 feet

Characteristics of the Lankbush Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 52 degrees F
Length of growing season—145 to 155 days
Typical profile:
0 to 12 inches—light brownish gray sandy loam
12 to 43 inches—light yellowish brown sandy clay loam
43 to 60 inches—light yellowish brown sand
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Runoff: Slow
Hazard of erosion by water: Slight

Contrasting Inclusions

- Lanktree loam
- Lolalita sandy loam
- Power silt loam

Use and Management

Major use: Irrigated cropland
Major management factors: None

Interpretive Groups

Capability classification: IIe, irrigated

113—Lankbush sandy loam, 4 to 8 percent slopes

Composition

Lankbush soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Lacustrine terraces
Elevation: 2,200 to 3,500 feet

Characteristics of the Lankbush Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 52 degrees F
Length of growing season—145 to 155 days
Typical profile:
0 to 12 inches—light brownish gray sandy loam
12 to 43 inches—light yellowish brown sandy clay loam
43 to 60 inches—light yellowish brown sand
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Runoff: Medium
Hazard of erosion by water: Slight

Contrasting Inclusions

- Glasgow clay loam
- Lanktree loam
- Lolalita sandy loam

Use and Management

Major use: Irrigated cropland
Major management factor: Slope

Interpretive Groups

Capability classification: IIIe, irrigated

114—Lankbush sandy loam, 8 to 12 percent slopes

Composition

Lankbush soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Lacustrine terraces
Elevation: 2,200 to 3,500 feet

Characteristics of the Lankbush Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 52 degrees F
Length of growing season—145 to 155 days
Typical profile:
0 to 12 inches—light brownish gray sandy loam
12 to 43 inches—light yellowish brown sandy clay loam
43 to 60 inches—light yellowish brown sand
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Runoff: Medium
Hazard of erosion by water: Slight or moderate

Contrasting Inclusions

- Glasgow clay loam
- Lanktree loam
- Lolalita sandy loam

Use and Management

Major use: Irrigated cropland
Major management factors: Slope and hazard of water erosion

Interpretive Groups

Capability classification: IVe, irrigated

115—Lankbush sandy loam, 12 to 30 percent slopes

Composition

Lankbush soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Dissected lacustrine terraces
Elevation: 2,200 to 3,500 feet

Characteristics of the Lankbush Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 52 degrees F
Length of growing season—145 to 155 days
Typical profile:
0 to 12 inches—light brownish gray sandy loam
12 to 43 inches—light yellowish brown sandy clay loam
43 to 60 inches—light yellowish brown sand
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Runoff: Medium or rapid
Hazard of erosion by water: Moderate or severe

Contrasting Inclusions

- Glasgow clay loam
- Lanktree loam
- Lolalita sandy loam

Use and Management

Major uses: Rangeland and irrigated cropland
Major management factors: Slope, low precipitation, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and Wyoming big sagebrush

Interpretive Groups

Capability classification: VIe, irrigated and nonirrigated
Range site: Loamy, 10- to 12-inch precipitation zone

116—Lanktree loam, 0 to 2 percent slopes

Composition

Lanktree soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Fan terraces
Elevation: 2,200 to 3,500 feet

Characteristics of the Lanktree Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 52 degrees F
Length of growing season—140 to 150 days
Typical profile:
0 to 10 inches—gray loam
10 to 26 inches—pale brown clay loam
26 to 60 inches—pale brown loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: High
Runoff: Slow
Hazard of erosion by water: Slight

Contrasting Inclusions

- Agerdelly clay
- Haw silt loam
- Lankbush sandy loam

Use and Management

Major uses: Rangeland and irrigated cropland
Major management factor: Low precipitation
Dominant vegetation in potential plant community: Bluebunch wheatgrass and Wyoming big sagebrush

Interpretive Groups

Capability classification: I, irrigated, and VIc, nonirrigated
Range site: Loamy, 10- to 12-inch precipitation zone

117—Lanktree loam, 2 to 30 percent slopes

Composition

Lanktree soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Fan terraces
Elevation: 2,200 to 3,500 feet

Characteristics of the Lanktree Soil

Position on landscape: Summits, shoulders, and side slopes
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 52 degrees F
Length of growing season—140 to 150 days
Typical profile:
0 to 10 inches—gray loam
10 to 26 inches—pale brown clay loam
26 to 60 inches—pale brown loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: High
Runoff: Slow to rapid
Hazard of erosion by water: Slight to severe

Contrasting Inclusions

- Agerdelly clay
- Glasgow clay loam
- Lankbush sandy loam

Use and Management

Major use: Rangeland
Major management factors: Low precipitation and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and Wyoming big sagebrush

Interpretive Groups

Capability classification: VIe, nonirrigated
Range site: Loamy, 10- to 12-inch precipitation zone

118—Lanktree clay loam, 4 to 8 percent slopes

Composition

Lanktree soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Fan terraces
Elevation: 2,200 to 3,500 feet

Characteristics of the Lanktree Soil

Position on landscape: Summits and shoulders
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 52 degrees F
Length of growing season—140 to 150 days
Typical profile:
0 to 10 inches—pale brown clay loam
10 to 40 inches—pale brown clay loam and clay
40 to 60 inches—pale brown loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: High
Runoff: Medium
Hazard of erosion by water: Moderate

Contrasting Inclusions

- Haw silt loam
- Purdam silt loam

Use and Management

Major uses: Rangeland and irrigated cropland
Major management factors: Slope, hazard of water erosion, and low precipitation
Dominant vegetation in potential plant community: Bluebunch wheatgrass and Wyoming big sagebrush

Interpretive Groups

Capability classification: IIIe, irrigated, and VIe, nonirrigated
Range site: Loamy, 10- to 12-inch precipitation zone

119—Lanktree very cobbly loam, 2 to 30 percent slopes

Composition

Lanktree soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Dissected lacustrine terraces
Elevation: 2,200 to 3,500 feet

Characteristics of the Lanktree Soil

Position on landscape: Summits, shoulders, and side slopes

Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 52 degrees F
Length of growing season—140 to 150 days
Typical profile:
0 to 8 inches—pale brown very cobbly loam
8 to 38 inches—pale brown clay loam and clay
38 to 60 inches—pale brown loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: High
Runoff: Slow to rapid
Hazard of erosion by water: Slight to severe

Contrasting Inclusions

- Agerdelly clay
- Bakeoven extremely stony loam
- Dishner very stony silty clay loam
- Haw silt loam

Use and Management

Major use: Rangeland
Major management factors: Low precipitation and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and Wyoming big sagebrush

Interpretive Groups

Capability classification: VIe, nonirrigated
Range site: Loamy, 10- to 12-inch precipitation zone

120—Lanktree-Lankbush complex, 30 to 60 percent slopes

Composition

Lanktree soil and similar inclusions—45 percent
Lankbush soil and similar inclusions—40 percent
Contrasting inclusions—15 percent

Setting

Landform: Dissected lacustrine terraces
Elevation: 2,200 to 3,500 feet

Characteristics of the Lanktree Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 52 degrees F
Length of growing season—140 to 150 days
Typical profile:
0 to 10 inches—gray loam
10 to 36 inches—pale brown clay loam
36 to 60 inches—pale brown loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: High
Runoff: Very rapid
Hazard of erosion by water: Severe or very severe

Characteristics of the Lankbush Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 52 degrees F
Length of growing season—140 to 150 days
Typical profile:
0 to 12 inches—light brownish gray sandy loam
12 to 43 inches—light yellowish brown sandy clay loam
43 to 60 inches—light yellowish brown sand
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Runoff: Very rapid
Hazard of erosion by water: Severe or very severe

Contrasting Inclusions

- Agerdelly clay
- Glasgow clay loam
- Haw silt loam
- Lolalita sandy loam
- Van Dusen loam

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, slope, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and Wyoming big sagebrush

Interpretive Groups

Capability classification: VIIe, nonirrigated
Range site: South Slope Loamy, 10- to 12-inch precipitation zone

121—Ligget sandy loam, 5 to 30 percent slopes

Composition

Ligget soil and similar inclusions—85 percent
Contrasting inclusions—15 percent

Setting

Landform: Mountains
Elevation: 4,000 to 5,700 feet

Characteristics of the Ligget Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—28 to 32 inches
Air temperature—36 to 42 degrees F
Length of growing season—60 to 80 days
Typical profile:
3 inches to 0—decomposed organic matter
0 to 4 inches—brown sandy loam
4 to 6 inches—pale brown sandy loam
6 to 14 inches—light yellowish brown sandy loam
14 to 46 inches—yellowish brown sandy loam
46 to 54 inches—yellowish brown loamy sand
54 inches—weathered granite
Depth class: Deep
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Moderate
Restriction to rooting depth: Bedrock at a depth of 40 to 60 inches
Runoff: Medium or rapid
Hazard of erosion by water: Moderate or severe

Contrasting Inclusions

- Demast loam
- Jughandle sandy loam

Use and Management

Major use: Woodland
Major management factor: Hazard of water erosion
Dominant vegetation in potential plant community: Grand fir, Douglas fir, ponderosa pine, mallow ninebark, elk sedge, and pine reedgrass
Mean site index for stated species: Douglas fir—80; ponderosa pine—90
Estimated average annual production per acre: Douglas fir—2,750 cubic feet of timber 0.6 inch in diameter or more at 40 years of age; ponderosa pine—3,400 cubic feet of timber 0.6 inch in diameter or more at 40 years of age

Interpretive Groups

Capability classification: VIe, nonirrigated

122—Ligget sandy loam, 30 to 60 percent slopes

Composition

Ligget soil and similar inclusions—85 percent
Contrasting inclusions—15 percent

Setting

Landform: Mountains
Elevation: 4,000 to 5,600 feet

Characteristics of the Ligget Soil

Position on landscape: South-facing side slopes
Climatic data (average annual):
Precipitation—28 to 32 inches
Air temperature—36 to 42 degrees F
Length of growing season—60 to 80 days
Typical profile:
3 inches to 0—decomposed organic matter
0 to 4 inches—brown sandy loam
4 to 6 inches—pale brown sandy loam
6 to 14 inches—light yellowish brown sandy loam
14 to 46 inches—yellowish brown sandy loam
46 to 54 inches—yellowish brown loamy sand
54 inches—weathered granite
Depth class: Deep
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Moderate
Restriction to rooting depth: Bedrock at a depth of 40 to 60 inches
Runoff: Very rapid
Hazard of erosion by water: Very severe

Contrasting Inclusions

- Demast loam
- Jughandle sandy loam
- Shellrock loamy coarse sand
- Soils that are 20 to 40 inches deep to bedrock
- Soils that are more than 35 percent rock fragments

Use and Management

Major use: Woodland
Major management factors: Slope and hazard of water erosion

Dominant vegetation in potential plant community: Grand fir, Douglas fir, ponderosa pine, mallow ninebark, elk sedge, and pine reedgrass
Mean site index for stated species: Douglas fir—80; ponderosa pine—90
Estimated average annual production per acre: Douglas fir—2,750 cubic feet of timber 0.6 inch in diameter or more at 40 years of age; ponderosa pine—3,400 cubic feet of timber 0.6 inch in diameter or more at 40 years of age

Interpretive Groups

Capability classification: VIIe, nonirrigated

123—Lolalita sandy loam, 4 to 8 percent slopes

Composition

Lolalita soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Lacustrine terraces
Elevation: 2,300 to 3,000 feet

Characteristics of the Lolalita Soil

Position on landscape: Summits and shoulders
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—48 to 52 degrees F
Length of growing season—145 to 155 days
Typical profile:
0 to 4 inches—grayish brown sandy loam
4 to 38 inches—light yellowish brown sandy loam
38 to 60 inches—white sandy loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Moderate
Runoff: Medium
Hazard of erosion by water: Slight

Contrasting Inclusions

- Glasgow clay loam
- Lankbush sandy loam

Use and Management

Major use: Irrigated cropland
Major management factor: Slope

Interpretive Groups

Capability classification: IIIe, irrigated

124—Lolalita sandy loam, 8 to 12 percent slopes

Composition

Lolalita soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Lacustrine terraces
Elevation: 2,300 to 3,000 feet

Characteristics of the Lolalita Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—48 to 52 degrees F
Length of growing season—145 to 155 days
Typical profile:
0 to 4 inches—grayish brown sandy loam
4 to 38 inches—light yellowish brown sandy loam
38 to 60 inches—white sandy loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Moderate
Runoff: Medium
Hazard of erosion by water: Moderate

Contrasting Inclusions

- Glasgow clay loam
- Lankbush sandy loam

Use and Management

Major use: Irrigated cropland
Major management factors: Slope and hazard of water erosion

Interpretive Groups

Capability classification: IVe, irrigated

125—Lolalita sandy loam, 12 to 30 percent slopes

Composition

Lolalita soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Dissected lacustrine terraces
Elevation: 2,300 to 3,000 feet

Characteristics of the Lolalita Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—48 to 52 degrees F
Length of growing season—145 to 155 days
Typical profile:
0 to 4 inches—grayish brown sandy loam
4 to 38 inches—light yellowish brown sandy loam
38 to 60 inches—white sandy loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Moderate
Runoff: Rapid
Hazard of erosion by water: Moderate or severe

Contrasting Inclusions

- Glasgow clay loam
- Lankbush sandy loam

Use and Management

Major uses: Rangeland and irrigated cropland
Major management factors: Low precipitation, slope, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and Wyoming big sagebrush

Interpretive Groups

Capability classification: VIe, irrigated and nonirrigated
Range site: Loamy, 10- to 12-inch precipitation zone

126—Lolalita-Glasgow complex, 30 to 60 percent slopes

Composition

Lolalita soil and similar inclusions—65 percent
Glasgow soil and similar inclusions—25 percent
Contrasting inclusions—10 percent

Setting

Landform: Dissected lacustrine terraces
Elevation: 2,300 to 3,500 feet

Characteristics of the Lolalita Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—48 to 52 degrees F
Length of growing season—120 to 145 days
Typical profile:
0 to 4 inches—grayish brown sandy loam
4 to 38 inches—light yellowish brown sandy loam
38 to 60 inches—white sandy loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Moderate
Runoff: Very rapid
Hazard of erosion by water: Very severe

Characteristics of the Glasgow Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—48 to 52 degrees F
Length of growing season—120 to 145 days
Typical profile:
0 to 13 inches—light brownish gray clay loam
13 to 17 inches—brown clay
17 to 25 inches—pale brown clay
25 to 38 inches—very pale brown clay loam
38 inches—volcanic tuff
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low
Restriction to rooting depth: Tuff at a depth of 20 to 40 inches
Runoff: Rapid or very rapid
Hazard of erosion by water: Very severe

Contrasting Inclusions

- Deshler silty clay loam
- Lankbush sandy loam
- Payette coarse sandy loam

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, slope, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community:

Bluebunch wheatgrass and Wyoming big sagebrush

Interpretive Groups

Capability classification: VIIe, nonirrigated
Range site: South Slope Loamy, 10- to 12-inch precipitation zone

127—Lolalita-Saralegui complex, 30 to 60 percent slopes

Composition

Lolalita soil and similar inclusions—55 percent
Saralegui soil and similar inclusions—35 percent
Contrasting inclusions—10 percent

Setting

Landform: Dissected lacustrine terraces
Elevation: 2,300 to 2,800 feet

Characteristics of the Lolalita Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—48 to 50 degrees F
Length of growing season—130 to 145 days
Typical profile:
0 to 4 inches—grayish brown sandy loam
4 to 38 inches—light yellowish brown sandy loam
38 to 60 inches—white sandy loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Moderate
Runoff: Very rapid
Hazard of erosion by water: Very severe

Characteristics of the Saralegui Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—48 to 50 degrees F
Length of growing season—130 to 145 days
Typical profile:
0 to 3 inches—light brownish gray sandy loam
3 to 60 inches—light brownish gray sandy loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Moderate
Runoff: Very rapid
Hazard of erosion by water: Very severe

Contrasting Inclusions

- Glasgow clay loam
- Haw silt loam
- Lankbush sandy loam
- Payette coarse sandy loam
- Van Dusen loam

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, slope, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and Wyoming big sagebrush

Interpretive Groups

Capability classification: VIIe, nonirrigated
Range site: South Slope Loamy, 10- to 12-inch precipitation zone

128—Lorella-Rock outcrop complex, 30 to 50 percent slopes

Composition

Lorella soil and similar inclusions—70 percent
Rock outcrop—20 percent
Contrasting inclusions—10 percent

Setting

Landform: Mountains and canyons
Elevation: 3,500 to 4,000 feet

Characteristics of the Lorella Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—12 to 16 inches
Air temperature—48 to 50 degrees F
Length of growing season—110 to 125 days
Typical profile:
0 to 6 inches—grayish brown very stony clay loam
6 to 15 inches—dark brown and dark yellowish brown very stony clay loam
15 to 18 inches—yellowish brown very stony clay
18 inches—basalt
Depth class: Shallow
Drainage class: Well drained
Permeability: Slow
Available water capacity: Very low

Restriction to rooting depth: Bedrock at a depth of 10 to 20 inches
Runoff: Very rapid
Hazard of erosion by water: Severe

Characteristics of the Rock Outcrop

Position on landscape: Side slopes and cliffs
Kind of rock: Exposed, hard basalt
Vegetation: None, except in fractures

Contrasting Inclusions

- Deterson clay loam
- Mulett very stony loam
- Soils that are 40 to 60 inches deep to bedrock and do not have stones

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, slope, stones on the surface, depth to bedrock, available water capacity, hazard of water erosion, and areas of Rock outcrop
Dominant vegetation in potential plant community: Bluebunch wheatgrass and xeric big sagebrush

Interpretive Groups

Capability classification: VIIs, nonirrigated
Range site: Shallow South Stony, 12- to 16-inch precipitation zone

129—Lorella-Rock outcrop complex, 50 to 65 percent slopes

Composition

Lorella soil and similar inclusions—60 percent
Rock outcrop—30 percent
Contrasting inclusions—10 percent

Setting

Landform: Mountains
Elevation: 3,500 to 4,200 feet

Characteristics of the Lorella Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—12 to 16 inches
Air temperature—48 to 50 degrees F
Length of growing season—110 to 125 days
Typical profile:
0 to 6 inches—grayish brown very stony clay loam
6 to 15 inches—dark brown and dark yellowish brown very stony clay loam
15 to 18 inches—yellowish brown very stony clay
18 inches—basalt
Depth class: Shallow
Drainage class: Well drained
Permeability: Slow
Available water capacity: Very low
Restriction to rooting depth: Bedrock at a depth of 10 to 20 inches
Runoff: Very rapid
Hazard of erosion by water: Severe or very severe

Characteristics of the Rock Outcrop

Position on landscape: Side slopes and cliffs
Kind of rock: Exposed, hard basalt
Vegetation: None, except in fractures

Contrasting Inclusions

- Deterson silt loam
- Mulett very stony loam
- Soils that are 40 to 60 inches deep to bedrock and do not have stones

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, slope, stones on the surface, depth to bedrock, available water capacity, hazard of water erosion, and areas of Rock outcrop
Dominant vegetation in potential plant community: Bluebunch wheatgrass, Idaho fescue, and xeric big sagebrush

Interpretive Groups

Capability classification: VIIs, nonirrigated
Range site: Shallow South Stony, 12- to 16-inch precipitation zone

130—McDaniel stony loam, 10 to 60 percent slopes

Composition

McDaniel soil and similar inclusions—85 percent
Contrasting inclusions—15 percent

Setting

Landform: Canyons
Elevation: 2,600 to 3,800 feet

Characteristics of the McDaniel Soil

Position on landscape: North-facing side slopes
Climatic data (average annual):
Precipitation—16 to 18 inches

Air temperature—48 to 50 degrees F
Length of growing season—120 to 135 days
Typical profile:
0 to 5 inches—brown stony loam
5 to 10 inches—brown extremely cobbly silty clay loam
10 to 27 inches—brown extremely cobbly silty clay loam
27 to 60 inches—yellowish brown extremely cobbly silty clay loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Runoff: Medium to very rapid
Hazard of erosion by water: Moderate to very severe

Contrasting Inclusions

- Starveout stony loam
- Soils that are more than 35 percent clay in the lower part and are 20 to 40 inches deep to bedrock
- Rock outcrop

Use and Management

Major use: Rangeland
Major management factors: Slope and hazard of water erosion
Dominant vegetation in potential plant community:
Common snowberry and Idaho fescue

Interpretive Groups

Capability classification: VIIs, nonirrigated
Range site: North Slope Loamy, 16- to 22-inch precipitation zone

131—McDaniel-Rockly complex, 10 to 70 percent slopes

Composition

McDaniel soil and similar inclusions—55 percent
Rockly soil and similar inclusions—25 percent
Contrasting inclusions—20 percent

Setting

Landform: Foothills, mountains, and canyons
Elevation: 1,800 to 3,600 feet

Characteristics of the McDaniel Soil

Position on landscape: West-facing side slopes
Climatic data (average annual):
Precipitation—16 to 18 inches
Air temperature—48 to 50 degrees F
Length of growing season—120 to 130 days
Slope range: 10 to 60 percent
Typical profile:
0 to 5 inches—brown very stony loam
5 to 10 inches—brown extremely cobbly silty clay loam
10 to 27 inches—brown extremely cobbly silty clay loam
27 to 60 inches—yellowish brown extremely cobbly silty clay loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Runoff: Medium to very rapid
Hazard of erosion by water: Moderate to very severe

Characteristics of the Rockly Soil

Position on landscape: South-facing side slopes
Climatic data (average annual):
Precipitation—16 to 18 inches
Air temperature—48 to 50 degrees F
Length of growing season—110 to 120 days
Slope range: 10 to 70 percent
Typical profile:
0 to 3 inches—brown very stony loam
3 to 8 inches—yellowish brown very gravelly clay loam
8 inches—basalt
Depth class: Very shallow
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Very low
Restriction to rooting depth: Bedrock at a depth of 4 to 10 inches
Runoff: Medium to very rapid
Hazard of erosion by water: Moderate to very severe

Contrasting Inclusions

- Meland very stony loam
- Rock outcrop

Use and Management

Major use: Rangeland
Major management factors: Slope, stones on the surface, depth to bedrock, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community:
McDaniel soil—bluebunch wheatgrass and Idaho fescue; Rockly soil—bluebunch wheatgrass and Sandberg bluegrass

Interpretive Groups

Capability classification: VIIs, nonirrigated
Range site: McDaniel soil—South Slope Loamy, 16- to

22-inch precipitation zone; Rockly soil—Very Shallow, 12- to 22-inch precipitation zone

132—McDaniel-Starveout complex, 10 to 60 percent slopes

Composition

McDaniel soil and similar inclusions—70 percent
Starveout soil and similar inclusions—15 percent
Contrasting inclusions—15 percent

Setting

Landform: Canyons
Elevation: 1,800 to 3,500 feet

Characteristics of the McDaniel Soil

Position on landscape: West-facing side slopes
Climatic data (average annual):
Precipitation—16 to 18 inches
Air temperature—48 to 52 degrees F
Length of growing season—120 to 135 days
Slope range: 10 to 60 percent
Typical profile:
0 to 5 inches—brown very stony loam
5 to 10 inches—brown extremely cobbly silty clay loam
10 to 27 inches—brown extremely cobbly silty clay loam
27 to 60 inches—yellowish brown extremely cobbly silty clay loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Runoff: Medium to very rapid
Hazard of erosion by water: Moderate to very severe

Characteristics of the Starveout Soil

Position on landscape: West-facing side slopes
Climatic data (average annual):
Precipitation—16 to 18 inches
Air temperature—46 to 48 degrees F
Length of growing season—120 to 135 days
Slope range: 10 to 45 percent
Typical profile:
0 to 3 inches—grayish brown stony loam
3 to 11 inches—dark grayish brown clay loam
11 to 21 inches—dark yellowish brown clay loam
21 to 36 inches—brown clay loam
36 to 60 inches—strong brown clay loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: High
Restriction to rooting depth: Abrupt textural change at a depth of 2 to 4 inches
Runoff: Medium or rapid
Hazard of erosion by water: Slight or moderate

Contrasting Inclusions

- Gwin very stony loam
- Rock outcrop

Use and Management

Major use: Rangeland
Major management factors: Slope, stones on the surface, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and Idaho fescue

Interpretive Groups

Capability classification: VIIs, nonirrigated
Range site: McDaniel soil—South Slope Loamy, 16- to 22-inch precipitation zone; Starveout soil—Loamy, 16- to 22-inch precipitation zone

133—Meland silt loam, 4 to 8 percent slopes

Composition

Meland soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Foothills and mountains
Elevation: 3,200 to 5,000 feet

Characteristics of the Meland Soil

Position on landscape: Summits and shoulders
Climatic data (average annual):
Precipitation—18 to 22 inches
Air temperature—47 to 49 degrees F
Length of growing season—110 to 130 days
Typical profile:
0 to 2 inches—dark brown silt loam
2 to 7 inches—brown silt loam
7 to 15 inches—dark brown clay loam
15 to 22 inches—brown gravelly clay loam
22 to 25 inches—dark brown gravelly clay loam
25 inches—basalt
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Low
Restriction to rooting depth: Bedrock at a depth of 20 to 40 inches

Runoff: Medium
Hazard of erosion by water: Slight

Contrasting Inclusions

- Jacknife loam
- Riggins extremely stony loam
- Rock outcrop

Use and Management

Major use: Nonirrigated cropland
Major management factor: Available water capacity

Interpretive Groups

Capability classification: IIIe, nonirrigated

134—Meland silt loam, 8 to 12 percent slopes

Composition

Meland soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Foothills and mountains
Elevation: 3,200 to 5,000 feet

Characteristics of the Meland Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—18 to 22 inches
Air temperature—47 to 49 degrees F
Length of growing season—110 to 130 days
Typical profile:
0 to 2 inches—dark brown silt loam
2 to 7 inches—brown silt loam
7 to 15 inches—dark brown clay loam
15 to 22 inches—brown gravelly clay loam
22 to 25 inches—dark brown gravelly clay loam
25 inches—basalt
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Low
Restriction to rooting depth: Bedrock at a depth of 20 to 40 inches
Runoff: Medium
Hazard of erosion by water: Moderate

Contrasting Inclusions

- Jacknife loam
- Riggins extremely stony loam
- Rock outcrop

Use and Management

Major use: Nonirrigated cropland
Major management factors: Available water capacity, slope, and hazard of water erosion

Interpretive Groups

Capability classification: IIIe, nonirrigated

135—Meland silt loam, 12 to 30 percent slopes

Composition

Meland soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Foothills and mountains
Elevation: 3,200 to 5,000 feet

Characteristics of the Meland Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—18 to 22 inches
Air temperature—47 to 49 degrees F
Length of growing season—110 to 130 days
Typical profile:
0 to 2 inches—dark brown silt loam
2 to 7 inches—brown silt loam
7 to 15 inches—dark brown clay loam
15 to 22 inches—brown gravelly clay loam
22 to 25 inches—dark brown gravelly clay loam
25 inches—basalt
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Low
Restriction to rooting depth: Bedrock at a depth of 20 to 40 inches
Runoff: Medium
Hazard of erosion by water: Moderate or severe

Contrasting Inclusions

- Jacknife loam
- Riggins extremely stony loam
- Rockly extremely stony loam

Use and Management

Major uses: Rangeland, hayland, and pastureland
Major management factors: Slope, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Idaho fescue and antelope bitterbrush

Interpretive Groups

Capability classification: IVe, nonirrigated
Range site: Loamy, 16- to 20-inch precipitation zone

136—Meland very stony loam, 4 to 30 percent slopes

Composition

Meland soil and similar inclusions—85 percent
Contrasting inclusions—15 percent

Setting

Landform: Foothills and mountains
Elevation: 3,200 to 5,000 feet

Characteristics of the Meland Soil

Position on landscape: Shoulders and side slopes
Climatic data (average annual):
Precipitation—18 to 22 inches
Air temperature—47 to 49 degrees F
Length of growing season—110 to 130 days
Typical profile:
0 to 2 inches—dark brown very stony loam
2 to 7 inches—brown very stony loam
7 to 15 inches—dark brown clay loam
15 to 22 inches—brown cobbly clay loam
22 to 25 inches—dark brown cobbly clay loam
25 inches—basalt
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Low
Restriction to rooting depth: Bedrock at a depth of 20 to 40 inches
Runoff: Medium or rapid
Hazard of erosion by water: Moderate or severe

Contrasting Inclusions

- Appledellia clay loam
- Jacknife loam
- Riggins extremely stony loam

Use and Management

Major use: Rangeland
Major management factors: Stones on the surface, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Idaho fescue and antelope bitterbrush

Interpretive Groups

Capability classification: VIs, nonirrigated
Range site: Loamy, 16- to 20-inch precipitation zone

137—Meland-Riggins complex, 4 to 30 percent slopes

Composition

Meland soil and similar inclusions—50 percent
Riggins soil and similar inclusions—35 percent
Contrasting inclusions—15 percent

Setting

Landform: Foothills and mountains
Elevation: 3,500 to 5,000 feet

Characteristics of the Meland Soil

Position on landscape: Convex, south-facing side slopes
Climatic data (average annual):
Precipitation—18 to 22 inches
Air temperature—47 to 49 degrees F
Length of growing season—110 to 130 days
Typical profile:
0 to 2 inches—dark brown stony loam
2 to 7 inches—brown stony loam
7 to 15 inches—dark brown clay loam
15 to 22 inches—brown gravelly clay loam
22 to 25 inches—dark brown gravelly clay loam
25 inches—basalt
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Low
Restriction to rooting depth: Bedrock at a depth of 20 to 40 inches
Runoff: Medium or rapid
Hazard of erosion by water: Slight or moderate

Characteristics of the Riggins Soil

Position on landscape: Concave, south-facing side slopes
Climatic data (average annual):
Precipitation—18 to 22 inches
Air temperature—47 to 49 degrees F
Length of growing season—110 to 130 days
Typical profile:
0 to 4 inches—dark grayish brown extremely stony loam

4 to 19 inches—brown very cobbly clay loam
19 inches—basalt
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Very low
Restriction to rooting depth: Bedrock at a depth of 10 to 20 inches
Runoff: Medium or rapid
Hazard of erosion by water: Slight or moderate

Contrasting Inclusions

- Demasters loam
- Jacknife loam
- Klicker stony loam
- Soils that are 10 to 20 inches deep to tuff
- Rock outcrop

Use and Management

Major use: Rangeland
Major management factors: Stones on the surface, depth to bedrock, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Meland soil—Idaho fescue and antelope bitterbrush; Riggins soil—Idaho fescue and xeric big sagebrush

Interpretive Groups

Capability classification: IVe, nonirrigated
Range site: Meland soil—Loamy, 16- to 20-inch precipitation zone; Riggins soil—Shallow Stony Loam, 16- to 22-inch precipitation zone

138—Meland-Riggins complex, 30 to 60 percent slopes

Composition

Meland soil and similar inclusions—50 percent
Riggins soil and similar inclusions—40 percent
Contrasting inclusions—10 percent

Setting

Landform: Foothills and mountains
Elevation: 3,500 to 5,000 feet

Characteristics of the Meland Soil

Position on landscape: Convex, south-facing side slopes
Climatic data (average annual):
Precipitation—18 to 22 inches
Air temperature—47 to 49 degrees F
Length of growing season—110 to 130 days
Typical profile:
0 to 2 inches—dark brown stony loam
2 to 7 inches—brown stony loam
7 to 15 inches—dark brown clay loam
15 to 22 inches—brown gravelly clay loam
22 to 25 inches—dark brown gravelly clay loam
25 inches—basalt
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Low
Restriction to rooting depth: Bedrock at a depth of 20 to 40 inches
Runoff: Very rapid
Hazard of erosion by water: Severe or very severe

Characteristics of the Riggins Soil

Position on landscape: Concave, south-facing side slopes
Climatic data (average annual):
Precipitation—18 to 22 inches
Air temperature—47 to 49 degrees F
Length of growing season—110 to 130 days
Typical profile:
0 to 4 inches—dark grayish brown extremely stony loam
4 to 19 inches—brown very cobbly clay loam
19 inches—basalt
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Very low
Restriction to rooting depth: Bedrock at a depth of 10 to 20 inches
Runoff: Very rapid
Hazard of erosion by water: Severe or very severe

Contrasting Inclusions

- Demasters loam
- Jacknife loam
- Klicker stony loam
- Rock outcrop

Use and Management

Major use: Rangeland
Major management factors: Slope, stones on the surface, depth to bedrock, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and xeric big sagebrush

Interpretive Groups

Capability classification: VIIs, nonirrigated
Range site: Meland soil—South Slope Loamy, 16- to 22-inch precipitation zone; Riggins soil—Shallow South Stony, 12- to 16-inch precipitation zone

139—Melton loam, 0 to 2 percent slopes

Composition

Melton soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Outwash terraces
Elevation: 3,800 to 4,800 feet

Characteristics of the Melton Soil

Position on landscape: Fluvial bottoms
Climatic data (average annual):
Precipitation—22 to 24 inches
Air temperature—38 to 40 degrees F
Length of growing season—60 to 75 days
Typical profile:
0 to 12 inches—dark gray loam

Figure 7.—Small grain stubble in an area of Midvale silty clay loam, 2 to 4 percent slopes, in foreground. Meland and Riggins soils on foothills in background.

12 to 16 inches—brown loam
16 to 33 inches—reddish yellow gravelly sandy loam
33 to 60 inches—light brownish gray very cobbly loamy sand
Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderate in the upper part and rapid below
Available water capacity: Low
Restriction to rooting depth: Water table at a depth of 12 to 24 inches
Runoff: Slow
Hazard of erosion by water: Slight
Depth to water table: 12 to 24 inches in April through July
Frequency of flooding: Frequent

Contrasting Inclusions

- Blackwell clay loam
- Cabarton silty clay loam
- Donnel sandy loam
- Roseberry loam

Use and Management

Major uses: Hayland and pastureland
Major management factors: Short growing season, available water capacity, hazard of flooding, and wetness

Interpretive Groups

Capability classification: Vw, nonirrigated
Range site: Wet Meadow

140—Melton-Roseberry complex, 0 to 2 percent slopes

Composition

Melton soil and similar inclusions—50 percent
Roseberry soil and similar inclusions—35 percent
Contrasting inclusions—15 percent

Setting

Landform: Outwash terraces
Elevation: 3,800 to 4,800 feet

Characteristics of the Melton Soil

Position on landscape: Fluvial bottoms
Climatic data (average annual):
Precipitation—22 to 24 inches
Air temperature—38 to 40 degrees F
Length of growing season—60 to 75 days
Typical profile:
0 to 12 inches—dark gray loam
12 to 16 inches—brown loam
16 to 33 inches—reddish yellow gravelly sandy loam
33 to 60 inches—light brownish gray very cobbly loamy sand
Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderate in the upper part and rapid below
Available water capacity: Low
Restriction to rooting depth: Water table at a depth of 12 to 24 inches
Runoff: Slow
Hazard of erosion by water: Slight
Depth to water table: 12 to 24 inches in April through July
Frequency of flooding: Frequent

Characteristics of the Roseberry Soil

Position on landscape: Swales
Climatic data (average annual):
Precipitation—22 to 24 inches
Air temperature—38 to 40 degrees F
Length of growing season—60 to 75 days
Typical profile:
0 to 18 inches—very dark gray loam
18 to 26 inches—light yellowish brown loam
26 to 33 inches—pale brown loamy sand
33 to 40 inches—pale brown loamy coarse sand
40 to 55 inches—dark gray sandy loam
55 to 60 inches—dark grayish brown gravelly sand
Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderately rapid
Available water capacity: Moderate
Restriction to rooting depth: Water table at a depth of 18 to 30 inches
Runoff: Slow
Hazard of erosion by water: Slight
Depth to water table: 18 to 30 inches in April through July
Frequency of flooding: Occasional

Contrasting Inclusions

- Blackwell clay loam
- Gestrin loam
- Kangas coarse sandy loam
- Soils that are more than 35 percent pebbles

Use and Management

Major uses: Hayland and pastureland
Major management factors: Short growing season, available water capacity, wetness, and hazard of flooding

Interpretive Groups

Capability classification: Vw, nonirrigated
Range site: Wet Meadow

141—Midvale silty clay loam, 0 to 2 percent slopes

Composition

Midvale soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Fan terraces
Elevation: 2,400 to 3,500 feet

Characteristics of the Midvale Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—16 to 22 inches
Air temperature—46 to 50 degrees F
Length of growing season—120 to 145 days
Typical profile:
0 to 10 inches—dark grayish brown silty clay loam
10 to 19 inches—dark brown clay loam
19 to 30 inches—dark yellowish brown clay
30 to 39 inches—pale brown, discontinuous hardpan
39 to 56 inches—pale brown loam
56 to 60 inches—yellowish brown very fine sandy loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: High
Runoff: Slow
Hazard of erosion by water: Slight

Contrasting Inclusions

- Demoss loam
- Newell clay loam
- Onyx silt loam
- Soils that are wet

Use and Management

Major use: Nonirrigated cropland
Major management factors: None

Interpretive Groups

Capability classification: IIIc, nonirrigated

142—Midvale silty clay loam, 2 to 4 percent slopes

Composition

Midvale soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Fan terraces
Elevation: 2,400 to 3,500 feet

Characteristics of the Midvale Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—16 to 22 inches
Air temperature—46 to 50 degrees F
Length of growing season—120 to 145 days
Typical profile:
0 to 10 inches—dark grayish brown silty clay loam
10 to 19 inches—dark brown clay
19 to 30 inches—dark yellowish brown clay
30 to 39 inches—pale brown, discontinuous hardpan
39 to 56 inches—pale brown loam
56 to 60 inches—yellowish brown very fine sandy loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: High
Runoff: Slow
Hazard of erosion by water: Slight

Contrasting Inclusions

- Appledellia clay loam
- Bakeoven extremely stony loam

- Newell clay loam
- Onyx silt loam

Use and Management

Major use: Nonirrigated cropland (fig. 7)
Major management factors: None

Interpretive Groups

Capability classification: IIIc, nonirrigated

143—Midvale silty clay loam, 4 to 8 percent slopes

Composition

Midvale soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Fan terraces
Elevation: 2,400 to 3,500 feet

Characteristics of the Midvale Soil

Position on landscape: Summits and shoulders
Climatic data (average annual):
Precipitation—16 to 22 inches
Air temperature—46 to 50 degrees F
Length of growing season—120 to 145 days
Typical profile:
0 to 10 inches—dark grayish brown silty clay loam
10 to 19 inches—dark brown clay
19 to 30 inches—dark yellowish brown clay
30 to 39 inches—pale brown, discontinuous hardpan
39 to 56 inches—pale brown loam
56 to 60 inches—yellowish brown very fine sandy loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: High
Runoff: Medium
Hazard of erosion by water: Slight

Contrasting Inclusions

- Appledellia clay loam
- Gem stony clay loam
- Soils that are 15 to 35 percent pebbles and are 40 to 60 inches deep to bedrock

Use and Management

Major use: Nonirrigated cropland
Major management factor: Hazard of water erosion

Interpretive Groups

Capability classification: IIIe, nonirrigated

144—Midvale silty clay loam, 8 to 12 percent slopes

Composition

Midvale soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Fan terraces
Elevation: 2,400 to 3,500 feet

Characteristics of the Midvale Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—16 to 22 inches
Air temperature—46 to 50 degrees F
Length of growing season—120 to 145 days
Typical profile:
0 to 10 inches—dark grayish brown silty clay loam
10 to 19 inches—dark brown clay
19 to 30 inches—dark yellowish brown clay
30 to 39 inches—pale brown, discontinuous hardpan
39 to 56 inches—pale brown loam
56 to 60 inches—yellowish brown very fine sandy loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: High
Runoff: Medium
Hazard of erosion by water: Slight or moderate

Contrasting Inclusions

- Deshler silty clay loam

Use and Management

Major use: Nonirrigated cropland
Major management factor: Hazard of water erosion

Interpretive Groups

Capability classification: IIIe, nonirrigated

145—Midvale silty clay loam, 12 to 20 percent slopes

Composition

Midvale soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Fan terraces
Elevation: 2,400 to 3,500 feet

Characteristics of the Midvale Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—16 to 22 inches
Air temperature—46 to 50 degrees F
Length of growing season—120 to 145 days
Typical profile:
0 to 10 inches—dark grayish brown silty clay loam
10 to 19 inches—dark brown clay
19 to 30 inches—dark yellowish brown clay
30 to 39 inches—pale brown, discontinuous hardpan
39 to 56 inches—pale brown loam
56 to 60 inches—yellowish brown very fine sandy loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: High
Runoff: Medium
Hazard of erosion by water: Moderate

Contrasting Inclusions

- Brownlee sandy loam
- Deshler silty clay loam

Use and Management

Major uses: Nonirrigated cropland and rangeland
Major management factors: Slope and hazard of water erosion
Dominant vegetation in potential plant community:
Idaho fescue and antelope bitterbrush

Interpretive Groups

Capability classification: IVe, nonirrigated
Range site: Loamy, 16- to 20-inch precipitation zone

146—Midvale-Demoss complex, 2 to 4 percent slopes

Composition

Midvale soil and similar inclusions—50 percent
Demoss soil and similar inclusions—35 percent
Contrasting inclusions—15 percent

Setting

Landform: Lacustrine terraces
Elevation: 2,500 to 3,500 feet

Characteristics of the Midvale Soil

Position on landscape: Convex summits
Climatic data (average annual):
Precipitation—16 to 20 inches
Air temperature—48 to 50 degrees F
Length of growing season—120 to 140 days
Typical profile:
0 to 10 inches—dark grayish brown silty clay loam
10 to 19 inches—dark brown clay
19 to 30 inches—dark yellowish brown clay
30 to 39 inches—pale brown, discontinuous hardpan
39 to 56 inches—pale brown loam
56 to 60 inches—yellowish brown very fine sandy loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: High
Runoff: Slow
Hazard of erosion by water: Slight

Characteristics of the Demoss Soil

Position on landscape: Concave summits
Climatic data (average annual):
Precipitation—16 to 20 inches
Air temperature—48 to 50 degrees F
Length of growing season—120 to 140 days
Typical profile:
0 to 5 inches—dark grayish brown loam
5 to 9 inches—dark brown clay loam
9 to 12 inches—dark brown clay
12 to 17 inches—hardpan
17 inches—pale brown, semiconsolidated

sediment that breaks to sandy loam
Depth class: Shallow to a hardpan
Drainage class: Well drained
Permeability: Slow
Available water capacity: Very low
Restriction to rooting depth: Hardpan at a depth of 10 to 20 inches
Runoff: Slow or medium
Hazard of erosion by water: Slight

Contrasting Inclusions

- Brownlee loam
- Soils that have 15 to 35 percent pebbles
- Soils that are less than 10 inches deep to a hardpan

Use and Management

Major use: Nonirrigated cropland
Major management factors: Depth to semiconsolidated sediment and available water capacity

Interpretive Groups

Capability classification: IVe, nonirrigated

147—Molly-Littlesalmon complex, 30 to 60 percent slopes

Composition

Molly soil and similar inclusions—60 percent
Littlesalmon soil and similar inclusions—25 percent
Contrasting inclusions—15 percent

Setting

Landform: Mountains
Elevation: 3,800 to 5,400 feet

Characteristics of the Molly Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—30 to 40 inches
Air temperature—38 to 42 degrees F
Length of growing season—60 to 80 days
Typical profile:
1 inch to 0—decomposed organic matter
0 to 11 inches—brown and pale brown silt loam
11 to 26 inches—light brownish gray sandy loam
26 to 40 inches—pale brown gravelly sandy loam
40 to 60 inches—pale brown very gravelly sandy loam
60 inches—weathered granite
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Restriction to rooting depth: Bedrock at a depth of 40 to 60 inches
Runoff: Very rapid
Hazard of erosion by water: Very severe

Characteristics of the Littlesalmon Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—30 to 40 inches
Air temperature—38 to 44 degrees F
Length of growing season—60 to 80 days
Typical profile:
3 inches to 0—decomposed organic matter
0 to 4 inches—grayish brown loam
4 to 13 inches—brown loam
13 to 20 inches—pale brown cobbly sandy loam
20 to 28 inches—pale brown very cobbly loamy coarse sand
28 to 60 inches—grayish brown, very pale brown, and light gray extremely cobbly loamy coarse sand
60 inches—weathered granite
Depth class: Deep
Drainage class: Somewhat excessively drained
Permeability: Rapid
Available water capacity: Low
Runoff: Very rapid
Hazard of erosion by water: Very severe

Contrasting Inclusions

- Ligget sandy loam
- Soils that are 10 to 20 inches deep to bedrock
- Rock outcrop

Use and Management

Major use: Woodland
Major management factors: Slope, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Grand fir, Douglas fir, ponderosa pine, myrtle pachystima, and queencup beadlily
Mean site index for stated species (Molly soil): Grand fir—75; Douglas fir—105
Estimated average annual production per acre (Molly soil): Grand fir—11,050 cubic feet of timber 0.6 inch in diameter or more at 80 years of age; Douglas fir—4,500 cubic feet of timber 0.6 inch in diameter or more at 40 years of age

Mean site index for stated species (Littlesalmon soil): Grand fir—70; Douglas fir—100
Estimated average annual production per acre: Grand fir—10,350 cubic feet of timber 0.6 inch in diameter or more at 80 years of age; Douglas fir—4,100 cubic feet of timber 0.6 inch in diameter or more at 40 years of age

Interpretive Groups

Capability classification: VIIe, nonirrigated

148—Molly-Littlesalmon-Rock outcrop complex, 60 to 75 percent slopes

Composition

Molly soil and similar inclusions—30 percent
Littlesalmon soil and similar inclusions—30 percent
Rock outcrop—30 percent
Contrasting inclusions—10 percent

Figure 8.—Typical area of Mulett-Mackey complex, 30 to 60 percent slopes. The Snake River is at left.

Setting

Landform: Mountains
Elevation: 3,800 to 5,400 feet

Characteristics of the Molly Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—32 to 38 inches
Air temperature—30 to 40 degrees F
Length of growing season—60 to 80 days
Slope range: 60 to 65 percent
Typical profile:
1 inch to 0—decomposed organic matter
0 to 11 inches—brown and pale brown silt loam
11 to 26 inches—light brownish gray sandy loam
26 to 40 inches—pale brown gravelly sandy loam
40 to 60 inches—pale brown very gravelly sandy loam
60 inches—weathered granite
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Restriction to rooting depth: 40 to 60 inches
Runoff: Very rapid
Hazard of erosion by water: Very severe

Characteristics of the Littlesalmon Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—30 to 40 inches
Air temperature—38 to 44 degrees F
Length of growing season—60 to 80 days
Slope range: 60 to 75 percent
Typical profile:
3 inches to 0—decomposed organic matter
0 to 4 inches—grayish brown loam
4 to 13 inches—brown loam
13 to 20 inches—pale brown cobbly sandy loam
20 to 28 inches—pale brown very cobbly loamy coarse sand
28 to 60 inches—grayish brown, very pale brown, and light gray extremely cobbly loamy coarse sand
60 inches—weathered granite
Depth class: Deep
Drainage class: Somewhat excessively drained
Permeability: Rapid
Available water capacity: Low
Restriction to rooting depth: Bedrock at a depth of 40 to 60 inches
Runoff: Very rapid
Hazard of erosion by water: Very severe

Characteristics of the Rock Outcrop

Position on landscape: Steep side slopes and cliffs
Kind of rock: Exposed, hard granite
Vegetation: None, except in fractures

Contrasting Inclusions

- Ligget sandy loam
- Soils that are 10 to 20 inches deep to bedrock

Use and Management

Major use: Woodland
Major management factors: Slope, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Grand fir, Douglas fir, ponderosa pine, myrtle pachystima, and queencup beadlily
Mean site index for stated species (Molly soil): Grand fir—75; Douglas fir—105
Estimated average annual production per acre (Molly soil): Grand fir—11,050 cubic feet of timber 0.6 inch in diameter or more at 80 years of age; Douglas fir—4,500 cubic feet of timber 0.6 inch in diameter or more at 40 years of age
Mean site index for stated species (Littlesalmon soil): Grand fir—70; Douglas fir—100
Estimated average annual production per acre (Littlesalmon soil): Grand fir—10,350 cubic feet of timber 0.6 inch in diameter or more at 80 years of age; Douglas fir—4,100 cubic feet of timber 0.6 inch in diameter or more at 40 years of age

Interpretive Groups

Capability classification: VIIe, nonirrigated

149—Moonstone coarse sandy loam, 30 to 60 percent slopes

Composition

Moonstone soil and similar inclusions—75 percent
Contrasting inclusions—25 percent

Setting

Landform: Mountains
Elevation: 5,300 to 5,600 feet

Characteristics of the Moonstone Soil

Position on landscape: Side slopes

Climatic data (average annual):
Precipitation—16 to 18 inches
Air temperature—40 to 44 degrees F
Length of growing season—70 to 90 days
Typical profile:
0 to 20 inches—very dark grayish brown coarse sandy loam
20 to 34 inches—grayish brown gravelly coarse sandy loam
34 inches—weathered granite
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Very low
Restriction to rooting depth: Bedrock at a depth of 20 to 40 inches
Runoff: Very rapid
Hazard of erosion by water: Severe or very severe

Contrasting Inclusions

- Johnson coarse sandy loam
- Klicker stony loam
- Soils that are less than 35 percent rock fragments
- Rock outcrop

Use and Management

Major use: Rangeland
Major management factors: Slope, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Idaho fescue and mountain big sagebrush

Interpretive Groups

Capability classification: VIIe, nonirrigated
Range site: Loamy, 12- to 16-inch precipitation zone

150—Moulton fine sandy loam, 0 to 3 percent slopes

Composition

Moulton soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Stream terraces
Elevation: 2,100 to 2,300 feet

Characteristics of the Moulton Soil

Position on landscape: Fluvial bottoms
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—48 to 52 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 15 inches—grayish brown fine sandy loam
15 to 35 inches—brown fine sandy loam
35 to 60 inches—very gravelly sand
Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderately rapid in the upper part and rapid below
Available water capacity: Moderate
Restriction to rooting depth: Water table at a depth of 18 to 36 inches
Runoff: Slow
Hazard of erosion by water: Slight
Depth to water table: 18 to 36 inches year round
Frequency of flooding: Rare in most areas, but occasional in areas adjacent to the Snake and Weiser Rivers

Contrasting Inclusions

- Baldock silt loam
- Falk fine sandy loam
- Soils that are slightly effervescent and moderately alkaline

Use and Management

Major use: Irrigated cropland
Major management factor: Wetness

Interpretive Groups

Capability classification: IIIw, irrigated

151—Moulton loam, 0 to 3 percent slopes

Composition

Moulton soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Stream terraces
Elevation: 2,100 to 2,200 feet

Characteristics of the Moulton Soil

Position on landscape: Fluvial bottoms
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—48 to 52 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 12 inches—dark brown and brown loam

12 to 16 inches—dark brown fine sandy loam
16 to 26 inches—brown sandy loam
26 to 60 inches—very gravelly sand
Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderately rapid in the upper part and rapid below
Available water capacity: Moderate
Restriction to rooting depth: Water table at a depth of 18 to 36 inches
Runoff: Slow
Hazard of erosion by water: Slight
Depth to water table: 18 to 36 inches year round
Frequency of flooding: Rare

Contrasting Inclusions

- Baldock silt loam

Use and Management

Major use: Irrigated cropland
Major management factor: Wetness

Interpretive Groups

Capability classification: IIIw, irrigated

152—Moulton-Falk fine sandy loams, 0 to 3 percent slopes

Composition

Moulton soil and similar inclusions—50 percent
Falk soil and similar inclusions—45 percent
Contrasting inclusions—5 percent

Setting

Landform: Stream terraces
Elevation: 2,100 to 2,300 feet

Characteristics of the Moulton Soil

Position on landscape: Fluvial bottoms
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—48 to 51 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 15 inches—grayish brown fine sandy loam
15 to 35 inches—brown fine sandy loam
35 to 60 inches—very gravelly sand
Depth class: Very deep

Figure 9.—Alfalfa hay in an area of Newell clay loam, 0 to 2 percent slopes, in center. Gem and Reywat soils in foreground, and Deshler and Brownlee soils in background.

Drainage class: Poorly drained
Permeability: Moderately rapid in the upper part and rapid below
Available water capacity: Moderate
Restriction to rooting depth: Water table at a depth of 18 to 36 inches
Runoff: Slow
Hazard of erosion by water: Slight
Depth to water table: 18 to 36 inches year round
Frequency of flooding: Rare in most areas, but occasional in areas adjacent to the Snake and Weiser Rivers

Characteristics of the Falk Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—47 to 52 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 10 inches—light brownish gray fine sandy loam
10 to 22 inches—light brownish gray fine sandy loam
22 to 38 inches—light gray fine sandy loam
38 to 60 inches—very gravelly sand
Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderately rapid in the upper part and rapid below
Available water capacity: Moderate
Restriction to rooting depth: Water table at a depth of 36 to 60 inches
Runoff: Very slow
Hazard of erosion by water: Slight
Depth to water table: 36 to 60 inches in April through October
Frequency of flooding: Rare in most areas, but occasional in areas adjacent to the Snake and Weiser Rivers

Contrasting Inclusions

- Baldock silt loam

Use and Management

Major use: Irrigated cropland
Major management factor: Wetness

Interpretive Groups

Capability classification: IIIw, irrigated

153—Mulett-Mackey complex, 30 to 60 percent slopes

Composition

Mulett soil and similar inclusions—65 percent
Mackey soil and similar inclusions—25 percent
Contrasting inclusions—10 percent

Setting

Landform: Foothills and mountains (fig. 8)
Elevation: 2,000 to 3,500 feet

Characteristics of the Mulett Soil

Position on landscape: Crests and south-facing side slopes
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—47 to 50 degrees F
Length of growing season—120 to 130 days
Typical profile:
0 to 2 inches—light yellowish brown very stony loam
2 to 7 inches—pale brown very stony loam
7 to 12 inches—dark brown extremely stony loam
12 inches—basalt
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Very low
Restriction to rooting depth: Bedrock at a depth of 10 to 20 inches
Runoff: Very rapid
Hazard of erosion by water: Severe or very severe

Characteristics of the Mulett Soil

Position on landscape: South-facing side slopes
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—47 to 50 degrees F
Length of growing season—120 to 130 days
Typical profile:
0 to 4 inches—light yellowish brown extremely stony loam
4 to 12 inches—light yellowish brown very stony clay loam
12 to 22 inches—yellowish brown very stony loam
22 to 24 inches—brown extremely stony loam
24 inches—basalt
Depth class: Moderately deep

Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Low
Restriction to rooting depth: Bedrock at a depth of 20 to 40 inches
Runoff: Very rapid
Hazard of erosion by water: Severe or very severe

Contrasting Inclusions

- Devnot very stony clay loam
- Owyhee silt loam
- Reywat very stony loam
- Rock outcrop

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, slope, stones on the surface, depth to bedrock, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Mulett soil—Thurber needlegrass and black sagebrush; Mackey soil—bluebunch wheatgrass and Wyoming big sagebrush

Interpretive Groups

Capability classification: VIIs, nonirrigated
Range site: Mulett soil—Shallow Stony Loam, 8- to 10-inch precipitation zone; Mackey soil—South Slope Loamy, 10- to 12-inch precipitation zone

154—Nazaton-Naz complex, 40 to 90 percent slopes

Composition

Nazaton soil and similar inclusions—50 percent
Naz soil and similar inclusions—30 percent
Contrasting inclusions—20 percent

Setting

Landform: Mountains
Elevation: 2,800 to 4,400 feet

Characteristics of the Nazaton Soil

Position on landscape: North-facing side slopes
Climatic data (average annual):
Precipitation—24 to 28 inches
Air temperature—38 to 41 degrees F
Length of growing season—70 to 80 days
Slope range: 40 to 90 percent
Typical profile:
1 inch to 0—decomposed organic matter
0 to 16 inches—very dark grayish brown gravelly loam
16 to 20 inches—brown very cobbly loam
20 to 36 inches—brown extremely gravelly sandy loam
36 to 60 inches—yellowish brown extremely gravelly sandy loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Moderate
Runoff: Very rapid
Hazard of erosion by water: Very severe

Characteristics of the Naz Soil

Position on landscape: North-facing side slopes
Climatic data (average annual):
Precipitation—25 to 28 inches
Air temperature—38 to 41 degrees F
Length of growing season—70 to 80 days
Slope range: 40 to 70 percent
Typical profile:
1 inch to 0—decomposed organic matter
0 to 8 inches—gray loam
8 to 23 inches—grayish brown loam
23 to 27 inches—light brownish gray coarse sandy loam
27 to 60 inches—brown coarse sandy loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Moderate
Runoff: Very rapid
Hazard of erosion by water: Very severe

Contrasting Inclusions

- Roseberry loam
- Soils that are warmer
- Soils that are 10 to 20 inches deep to bedrock
- Rock outcrop

Use and Management

Major use: Woodland
Major management factors: Slope and hazard of water erosion
Dominant vegetation in potential plant community:

Nazaton soil—Douglas fir, ponderosa pine, willow, snowberry, and pine reedgrass; Naz soil—Douglas fir, ponderosa pine, cinquefoil, and pine reedgrass
Mean site index for stated species (Nazaton soil): Douglas fir—100
Estimated average annual production per acre (Nazaton soil): Douglas fir—4,100 cubic feet of timber 0.6 inch in diameter or more at 40 years of age
Mean site index for stated species (Naz soil): Douglas fir—80; ponderosa pine—100
Estimated average annual production per acre: Douglas fir—2,750 cubic feet of timber 0.6 inch in diameter or more at 40 years of age; ponderosa pine—4,100 cubic feet of timber 0.6 inch in diameter or more at 40 years of age

Interpretive Groups

Capability classification: VIIe, nonirrigated

155—Newell clay loam, 0 to 2 percent slopes

Composition

Newell soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Fan terraces
Elevation: 2,200 to 3,400 feet

Characteristics of the Newell Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—12 to 16 inches
Air temperature—47 to 51 degrees F
Length of growing season—110 to 130 days
Typical profile:
0 to 23 inches—dark grayish brown clay loam
23 to 34 inches—dark grayish brown silty clay loam
34 to 60 inches—dark grayish brown silty clay loam and grayish brown clay loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: High
Runoff: Slow
Hazard of erosion by water: Slight

Contrasting Inclusions

- Harpt loam
- Soils that do not have calcium carbonates

Use and Management

Major use: Irrigated cropland (fig. 9)
Major management factors: None

Interpretive Groups

Capability classification: IIc, irrigated

156—Newell clay loam, 2 to 4 percent slopes

Composition

Newell soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Fan terraces
Elevation: 2,200 to 3,400 feet

Characteristics of the Newell Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—12 to 16 inches
Air temperature—47 to 51 degrees F
Length of growing season—110 to 130 days
Typical profile:
0 to 23 inches—dark grayish brown clay loam
23 to 34 inches—dark grayish brown silty clay loam
34 to 60 inches—dark grayish brown silty clay loam and grayish brown clay loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: High
Runoff: Slow
Hazard of erosion by water: Slight

Contrasting Inclusions

- Agerdelly clay
- Harpt loam
- Soils that do not have calcium carbonates

Use and Management

Major use: Irrigated cropland
Major management factors: None

Interpretive Groups

Capability classification: IIe, irrigated

157—Newell clay loam, 4 to 8 percent slopes

Composition

Newell soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Fan terraces
Elevation: 2,200 to 3,400 feet

Characteristics of the Newell Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—12 to 16 inches
Air temperature—47 to 51 degrees F
Length of growing season—110 to 130 days
Typical profile:
0 to 23 inches—dark grayish brown clay loam
23 to 34 inches—dark grayish brown silty clay loam
34 to 60 inches—dark grayish brown silty clay loam and grayish brown clay loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: High
Runoff: Medium
Hazard of erosion by water: Slight

Contrasting Inclusions

- Harpt loam
- Soils that do not have calcium carbonates

Use and Management

Major use: Irrigated cropland
Major management factors: Slope and hazard of water erosion

Interpretive Groups

Capability classification: IIIe, irrigated

158—Newell stony clay loam, 2 to 12 percent slopes

Composition

Newell soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Fan terraces
Elevation: 2,200 to 3,400 feet

Characteristics of the Newell Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—12 to 16 inches
Air temperature—47 to 51 degrees F
Length of growing season—110 to 130 days
Typical profile:
0 to 12 inches—dark grayish brown stony clay loam
12 to 39 inches—dark grayish brown stony silty clay loam
39 to 60 inches—grayish brown stony clay loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: High
Runoff: Slow or medium
Hazard of erosion by water: Slight

Contrasting Inclusions

- Gem stony clay loam
- Haw silt loam
- Soils that have a very stony or extremely stony surface layer
- Tindahay loamy coarse sand

Use and Management

Major uses: Rangeland and irrigated cropland
Major management factors: Low precipitation, slope, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and xeric big sagebrush

Interpretive Groups

Capability classification: IVe, irrigated, and IIIe, nonirrigated
Range site: Loamy, 12- to 16-inch precipitation zone

Figure 10.—Onions under furrow irrigation in an area of Owyhee silt loam, 0 to 2 percent slopes.

159—Notus sandy loam, 0 to 3 percent slopes

Composition

Notus soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Stream terraces
Elevation: 2,100 to 2,300 feet

Characteristics of the Notus Soil

Position on landscape: Fluvial bottoms
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—50 to 52 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 1 inch—grayish brown sandy loam
1 inch to 8 inches—light brownish gray sandy loam
8 to 60 inches—white and gray very gravelly sand
Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderately rapid
Available water capacity: Low
Restriction to rooting depth: Water table at a depth of 36 to 60 inches
Runoff: Slow
Hazard of erosion by water: Slight
High water table (artificially lowered): 36 to 60 inches in March through September
Frequency of flooding: Occasional

Contrasting Inclusions

- Falk fine sandy loam
- Moulton fine sandy loam

Use and Management

Major use: Irrigated cropland
Major management factors: None

Interpretive Groups

Capability classification: IVs, irrigated

160—Nyssaton silt loam, 0 to 2 percent slopes

Composition

Nyssaton soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Fan terraces
Elevation: 2,100 to 2,300 feet

Characteristics of the Nyssaton Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—50 to 52 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 12 inches—light brownish gray silt loam
12 to 22 inches—white silt loam
22 to 40 inches—light gray silt loam
40 to 60 inches—grayish brown and white silt loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: High
Runoff: Very slow
Hazard of erosion by water: Slight

Contrasting Inclusions

- Greenleaf silt loam
- Owyhee silt loam

Use and Management

Major use: Irrigated cropland
Major management factors: None

Interpretive Groups

Capability classification: I, irrigated

161—Odermott-Appledellia complex, 12 to 30 percent slopes

Composition

Odermott soil and similar inclusions—55 percent
Appledellia soil and similar inclusions—40 percent
Contrasting inclusions—5 percent

Setting

Landform: Fan terraces
Elevation: 3,000 to 3,500 feet

Characteristics of the Odermott Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—20 to 23 inches
Air temperature—48 to 50 degrees F
Length of growing season—110 to 120 days
Typical profile:
0 to 6 inches—brown clay loam
6 to 26 inches—reddish brown clay
26 to 34 inches—yellowish red clay
34 to 60 inches—olive brown and light yellowish brown, stratified cobbles, pebbles, and sand
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow in the upper part and very rapid below
Available water capacity: Moderate
Runoff: Medium or rapid
Hazard of erosion by water: Moderate or severe

Characteristics of the Appledellia Soil

Position on landscape: Side slopes
Climatic data (average annual):
Precipitation—20 to 23 inches
Air temperature—48 to 50 degrees F
Length of growing season—110 to 120 days
Typical profile:
0 to 10 inches—brown clay loam
10 to 18 inches—reddish brown clay
18 to 32 inches—reddish brown gravelly clay
32 to 33 inches—hardpan
33 to 60 inches—multicolored extremely gravelly sand
Depth class: Moderately deep to a hardpan
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low
Restriction to rooting depth: Hardpan at a depth of 20 to 40 inches

Runoff: Medium or rapid
Hazard of erosion by water: Moderate or severe

Contrasting Inclusions

- Jacknife loam
- Soils that are 15 to 35 percent pebbles

Use and Management

Major uses: Nonirrigated cropland and rangeland
Major management factors: Slope, hazard of water erosion, and available water capacity
Dominant vegetation in potential plant community: Odermott soil—Idaho fescue and antelope bitterbrush; Appledellia soil—Idaho fescue and bluebunch wheatgrass

Interpretive Groups

Capability classification: VIe, nonirrigated
Range site: Odermott soil—Loamy, 16- to 20-inch precipitation zone; Appledellia soil—Loamy, 22+-inch precipitation zone

162—Oldsferry shaly loam, 25 to 65 percent slopes

Composition

Oldsferry soil and similar inclusions—85 percent
Contrasting inclusions—15 percent

Setting

Landform: Mountains and canyons
Elevation: 2,100 to 3,600 feet

Characteristics of the Oldsferry Soil

Position on landscape: South-facing side slopes
Climatic data (average annual):
Precipitation—12 to 18 inches
Air temperature—46 to 50 degrees F
Length of growing season—120 to 145 days
Typical profile:
0 to 4 inches—grayish brown shaly loam
4 to 18 inches—brown very shaly loam
18 to 28 inches—yellowish brown very shaly loam
28 inches—shale
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Very low
Restriction to rooting depth: Bedrock at a depth of 20 to 40 inches
Runoff: Very rapid
Hazard of erosion by water: Severe or very severe

Contrasting Inclusions

- Reywat very stony loam
- Soils that are less than 35 percent shale fragments
- Soils that are 40 to 60 inches deep to bedrock
- Soils that are 10 to 20 inches deep to bedrock
- Rock outcrop

Use and Management

Major use: Rangeland
Major management factors: Slope, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and xeric big sagebrush

Interpretive Groups

Capability classification: VIIe, nonirrigated
Range site: South Slope Loamy, 12- to 16-inch precipitation zone

163—Onyx silt loam, 0 to 3 percent slopes

Composition

Onyx soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Fan terraces
Elevation: 3,100 to 3,200 feet

Characteristics of the Onyx Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—14 to 16 inches
Air temperature—48 to 52 degrees F
Length of growing season—135 to 145 days
Typical profile:
0 to 60 inches—brown silt loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High
Runoff: Very slow
Hazard of erosion by water: Slight

Contrasting Inclusions

- Newell clay loam
- Soils that are effervescent

Use and Management

Major use: Irrigated cropland
Major management factors: None

Interpretive Groups

Capability classification: IIc, irrigated

164—Owyhee silt loam, 0 to 2 percent slopes

Composition

Owyhee soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Lacustrine terraces
Elevation: 2,100 to 2,400 feet

Characteristics of the Owyhee Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 52 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 12 inches—pale brown silt loam
12 to 21 inches—pale brown and light gray silt loam
21 to 60 inches—light gray silt loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: High
Runoff: Very slow
Hazard of erosion by water: Slight

Contrasting Inclusions

- Greenleaf silt loam
- Nyssaton silt loam

Use and Management

Major use: Irrigated cropland (fig. 10)
Major management factors: None

Interpretive Groups

Capability classification: I, irrigated

165—Owyhee silt loam, 2 to 4 percent slopes

Composition

Owyhee soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Lacustrine terraces
Elevation: 2,100 to 2,400 feet

Characteristics of the Owyhee Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 52 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 12 inches—pale brown silt loam
12 to 21 inches—pale brown and light gray silt loam
21 to 60 inches—light gray silt loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: High
Runoff: Slow
Hazard of erosion by water: Slight

Contrasting Inclusions

- Greenleaf silt loam
- Nyssaton silt loam

Use and Management

Major use: Irrigated cropland
Major management factors: None

Interpretive Groups

Capability classification: IIe, irrigated

166—Owyhee silt loam, 4 to 8 percent slopes

Composition

Owyhee soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Lacustrine terraces
Elevation: 2,100 to 2,400 feet

Characteristics of the Owyhee Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 52 degrees F
Length of growing season—150 to 155 days

Typical profile:
0 to 12 inches—pale brown silt loam
12 to 21 inches—pale brown and light gray silt loam
21 to 60 inches—light gray silt loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: High
Runoff: Medium
Hazard of erosion by water: Slight

Contrasting Inclusions

- Greenleaf silt loam
- Nyssaton silt loam

Use and Management

Major use: Irrigated cropland
Major management factor: Slope

Interpretive Groups

Capability classification: IIIe, irrigated

167—Owyhee silt loam, 8 to 12 percent slopes

Composition

Owyhee soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Lacustrine terraces
Elevation: 2,100 to 2,400 feet

Characteristics of the Owyhee Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 52 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 12 inches—pale brown silt loam
12 to 21 inches—pale brown and light gray silt loam
21 to 60 inches—light gray silt loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: High
Runoff: Medium
Hazard of erosion by water: Moderate

Contrasting Inclusions

- Greenleaf silt loam
- Nyssaton silt loam

Use and Management

Major use: Irrigated cropland
Major management factors: Slope and hazard of water erosion

Interpretive Groups

Capability classification: IVe, irrigated

168—Owyhee silt loam, 12 to 20 percent slopes

Composition

Owyhee soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Lacustrine terraces
Elevation: 2,100 to 2,400 feet

Characteristics of the Owyhee Soil

Position on landscape: Summits and side slopes
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 52 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 12 inches—pale brown silt loam
12 to 21 inches—pale brown and light gray silt loam
21 to 60 inches—light gray silt loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: High
Runoff: Rapid or very rapid
Hazard of erosion by water: Moderate or severe

Contrasting Inclusions

- Glasgow clay loam
- Greenleaf silt loam
- Nyssaton silt loam

Use and Management

Major use: Rangeland
Major management factors: Low precipitation and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and Wyoming big sagebrush

Interpretive Groups

Capability classification: VIe, nonirrigated
Range site: Loamy, 10- to 12-inch precipitation zone

169—Paniogue loam, 0 to 2 percent slopes

Composition

Paniogue soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Fan terraces
Elevation: 2,100 to 2,200 feet

Characteristics of the Paniogue Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—51 to 54 degrees F
Length of growing season—145 to 155 days
Typical profile:
0 to 12 inches—pale brown loam
12 to 16 inches—light gray very fine sandy loam
16 to 32 inches—pale brown silt loam
32 to 60 inches—light gray fine sand
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper part and very rapid below
Available water capacity: Moderate
Runoff: Very slow
Hazard of erosion by water: Slight

Contrasting Inclusions

- Power silt loam
- Purdam silt loam

Use and Management

Major use: Irrigated cropland
Major management factors: None

Interpretive Groups

Capability classification: IIe, irrigated

170—Payette coarse sandy loam, 12 to 30 percent slopes

Composition

Payette soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Dissected lacustrine terraces
Elevation: 2,300 to 3,000 feet

Characteristics of the Payette Soil

Position on landscape: Shoulders and south-facing side slopes
Climatic data (average annual):
Precipitation—12 to 13 inches
Air temperature—48 to 51 degrees F
Length of growing season—140 to 150 days
Typical profile:
0 to 10 inches—grayish brown coarse sandy loam
10 to 26 inches—brown coarse sandy loam
26 to 43 inches—pale brown coarse sandy loam
43 to 60 inches—very pale brown coarse sand
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Low
Runoff: Medium or rapid
Hazard of erosion by water: Moderate or severe

Contrasting Inclusions

- Lolalita sandy loam
- Van Dusen loam

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and xeric big sagebrush

Interpretive Groups

Capability classification: VIe, nonirrigated
Range site: Granitic, 12- to 16-inch precipitation zone

171—Payette coarse sandy loam, 30 to 60 percent slopes

Composition

Payette soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Dissected lacustrine terraces
Elevation: 2,300 to 3,000 feet

Characteristics of the Payette Soil

Position on landscape: South-facing side slopes
Climatic data (average annual):
Precipitation—12 to 13 inches
Air temperature—48 to 51 degrees F
Length of growing season—140 to 150 days
Typical profile:
0 to 10 inches—grayish brown coarse sandy loam
10 to 26 inches—brown coarse sandy loam
26 to 43 inches—pale brown coarse sandy loam
43 to 60 inches—very pale brown coarse sand
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Low
Runoff: Very rapid
Hazard of erosion by water: Very severe

Contrasting Inclusions

- Lolalita sandy loam
- Van Dusen loam

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, available water capacity, slope, and hazard of water erosion
Dominant vegetation in potential plant community:
Bluebunch wheatgrass and basin big sagebrush

Interpretive Groups

Capability classification: VIIe, nonirrigated
Range site: South Slope Granitic, 8- to 12-inch precipitation zone

172—Payette-Van Dusen association, 30 to 60 percent slopes

Composition

Payette soil and similar inclusions—50 percent
Van Dusen soil and similar inclusions—35 percent
Contrasting inclusions—15 percent

Setting

Landform: Dissected lacustrine terraces
Elevation: 2,400 to 3,500 feet

Characteristics of the Payette Soil

Position on landscape: South-facing side slopes
Climatic data (average annual):
Precipitation—12 to 13 inches
Air temperature—48 to 51 degrees F
Length of growing season—140 to 150 days
Typical profile:
0 to 10 inches—grayish brown coarse sandy loam
10 to 26 inches—brown coarse sandy loam
26 to 43 inches—pale brown coarse sandy loam
43 to 60 inches—very pale brown coarse sand
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Low
Runoff: Very rapid
Hazard of erosion by water: Very severe

Characteristics of the Van Dusen Soil

Position on landscape: North-facing side slopes
Climatic data (average annual):
Precipitation—12 to 14 inches
Air temperature—45 to 49 degrees F
Length of growing season—130 to 140 days
Typical profile:
0 to 14 inches—dark grayish brown loam
14 to 20 inches—dark grayish brown loam
20 to 32 inches—grayish brown and brown sandy clay loam
32 to 48 inches—brown loam
48 to 60 inches—brown sandy loam
Depth class: Very deep

Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: High
Runoff: Very rapid
Hazard of erosion by water: Very severe

Contrasting Inclusions

- Agerdelly clay
- Cashmere sandy loam
- Haw silt loam
- Lolalita sandy loam
- Rock outcrop

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, slope, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Payette soil—bluebunch wheatgrass and basin big sagebrush; Van Dusen soil—bluebunch wheatgrass and xeric big sagebrush

Interpretive Groups

Capability classification: VIIe, nonirrigated
Range site: Payette soil—South Slope Granitic, 8- to 12-inch precipitation zone; Van Dusen soil—North Slope Loamy, 12- to 16-inch precipitation zone

173—Power-Purdam silt loams, 0 to 2 percent slopes

Composition

Power soil and similar inclusions—50 percent
Purdam soil and similar inclusions—45 percent
Contrasting inclusions—5 percent

Setting

Landform: Stream terraces
Elevation: 2,100 to 2,500 feet

Characteristics of the Power Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—50 to 52 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 12 inches—light brownish gray silt loam
12 to 19 inches—pale brown silt loam
19 to 31 inches—yellowish brown silty clay loam
31 to 60 inches—very pale brown silt loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: High
Runoff: Very slow
Hazard of erosion by water: Slight

Characteristics of the Purdam Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—50 to 52 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 12 inches—light brownish gray silt loam
12 to 22 inches—pale brown silty clay loam
22 to 27 inches—white silt loam
27 to 35 inches—weakly cemented hardpan
35 to 60 inches—stratified silt, sand, and gravel
Depth class: Moderately deep to a hardpan
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Restriction to rooting depth: Hardpan at a depth of 20 to 40 inches
Runoff: Very slow
Hazard of erosion by water: Slight

Contrasting Inclusions

- Bissell soils that have a clay loam surface layer
- Greenleaf silt loam

Use and Management

Major use: Irrigated cropland
Major management factors: None

Interpretive Groups

Capability classification: I, irrigated

174—Power-Purdam silt loams, 2 to 4 percent slopes

Composition

Power soil and similar inclusions—50 percent
Purdam soil and similar inclusions—40 percent
Contrasting inclusions—10 percent

Setting

Landform: Stream terraces
Elevation: 2,100 to 2,500 feet

Characteristics of the Power Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—50 to 52 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 12 inches—light brownish gray silt loam
12 to 19 inches—pale brown silt loam
19 to 31 inches—yellowish brown silty clay loam
31 to 60 inches—very pale brown silt loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: High
Runoff: Slow
Hazard of erosion by water: Slight

Characteristics of the Purdam Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—50 to 52 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 12 inches—light brownish gray silt loam
12 to 22 inches—pale brown silty clay loam
22 to 27 inches—white silt loam
27 to 35 inches—weakly cemented hardpan
35 to 60 inches—stratified silt, sand, and gravel
Depth class: Moderately deep to a hardpan
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Restriction to rooting depth: Hardpan at a depth of 20 to 40 inches
Runoff: Slow
Hazard of erosion by water: Slight

Contrasting Inclusions

- Bissell clay loam
- Greenleaf silt loam

Use and Management

Major use: Irrigated cropland
Major management factors: None

Interpretive Groups

Capability classification: IIe, irrigated

175—Power-Purdam silt loams, 4 to 8 percent slopes

Composition

Power soil and similar inclusions—50 percent
Purdam soil and similar inclusions—45 percent
Contrasting inclusions—5 percent

Setting

Landform: Stream terraces
Elevation: 2,100 to 2,500 feet

Characteristics of the Power Soil

Position on landscape: Shoulders and side slopes
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—50 to 52 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 12 inches—light brownish gray silt loam
12 to 19 inches—pale brown silt loam
19 to 31 inches—yellowish brown silty clay loam
31 to 60 inches—very pale brown silt loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: High
Runoff: Medium
Hazard of erosion by water: Slight

Characteristics of the Purdam Soil

Position on landscape: Shoulders and side slopes

Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—50 to 52 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 12 inches—light brownish gray silt loam
12 to 22 inches—pale brown silty clay loam
22 to 27 inches—white silt loam
27 to 35 inches—weakly cemented hardpan
35 to 60 inches—stratified silt, sand, and gravel
Depth class: Moderately deep to a hardpan
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Restriction to rooting depth: Hardpan at a depth of 20 to 40 inches
Runoff: Medium
Hazard of erosion by water: Slight

Contrasting Inclusions

- Bissell clay loam
- Greenleaf silt loam

Use and Management

Major use: Irrigated cropland
Major management factor: Slope

Interpretive Groups

Capability classification: IIIe, irrigated

176—Riggins extremely stony loam, 4 to 30 percent slopes

Composition

Riggins soil and similar inclusions—85 percent
Contrasting inclusions—15 percent

Setting

Landform: Foothills and mountains
Elevation: 3,500 to 5,000 feet

Characteristics of the Riggins Soil

Position on landscape: Summits, shoulders, and south-facing side slopes
Climatic data (average annual):
Precipitation—18 to 22 inches
Air temperature—45 to 50 degrees F
Length of growing season—110 to 130 days
Typical profile:
0 to 4 inches—dark grayish brown extremely stony loam
4 to 19 inches—brown very cobbly clay loam
19 inches—basalt
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Very low
Restriction to rooting depth: Bedrock at a depth of 10 to 20 inches
Runoff: Medium or rapid
Hazard of erosion by water: Slight or moderate

Contrasting Inclusions

- Demasters loam
- Meland silt loam
- Rockly extremely stony loam
- Rock outcrop

Use and Management

Major use: Rangeland
Major management factors: Stones on the surface, depth to bedrock, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Idaho fescue and xeric big sagebrush

Interpretive Groups

Capability classification: VIIs, nonirrigated
Range site: Shallow Stony Loam, 16- to 22-inch precipitation zone

177—Riggins extremely stony loam, 30 to 50 percent slopes

Composition

Riggins soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Foothills and mountains
Elevation: 3,500 to 5,000 feet

Characteristics of the Riggins Soil

Position on landscape: South-facing side slopes
Climatic data (average annual):
Precipitation—18 to 22 inches
Air temperature—46 to 50 degrees F
Length of growing season—110 to 130 days

Typical profile:
0 to 4 inches—dark grayish brown extremely stony loam
4 to 19 inches—brown very cobbly clay loam
19 inches—basalt
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Very low
Restriction to rooting depth: Bedrock at a depth of 10 to 20 inches
Runoff: Very rapid
Hazard of erosion by water: Severe

Contrasting Inclusions

- Demasters loam
- Meland silt loam
- Rockly extremely stony loam
- Rock outcrop
- Five areas in secs. 9 and 16, T. 22 N., R. 1 E., that total about 430 acres and consist of soils that are underlain by schist

Use and Management

Major use: Rangeland
Major management factors: Slope, stones on the surface, depth to bedrock, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and xeric big sagebrush

Interpretive Groups

Capability classification: VIIs, nonirrigated
Range site: Shallow South Stony, 12- to 16-inch precipitation zone

178—Riggins extremely stony loam, 50 to 75 percent slopes

Composition

Riggins soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Foothills and mountains
Elevation: 3,500 to 5,000 feet

Characteristics of the Riggins Soil

Position on landscape: South-facing side slopes
Climatic data (average annual):
Precipitation—18 to 22 inches
Air temperature—46 to 50 degrees F
Length of growing season—110 to 130 days
Typical profile:
0 to 4 inches—dark grayish brown extremely stony loam
4 to 19 inches—brown very cobbly clay loam
19 inches—basalt
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Very low
Restriction to rooting depth: Bedrock at a depth of 10 to 20 inches
Runoff: Very rapid
Hazard of erosion by water: Very severe

Contrasting Inclusions

- Rockly extremely stony loam
- Rock outcrop

Use and Management

Major use: Rangeland
Major management factors: Slope, stones on the surface, depth to bedrock, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and xeric big sagebrush

Interpretive Groups

Capability classification: VIIs, nonirrigated
Range site: Shallow South Stony, 12- to 16-inch precipitation zone

179—Riverwash

Composition

Riverwash—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Channels
Elevation: 2,100 to 4,500 feet
Slope range: 0 to 3 percent

Characteristics of the Riverwash

Description of areas: Mainly sand, gravel, and cobbles

that are frequently flooded, washed, and reworked by streams or rivers
Vegetation: Little, if any

Contrasting Inclusions

- Notus sandy loam

Interpretive Groups

Capability classification: VIII

180—Rock outcrop-Bakeoven complex, 60 to 80 percent slopes

Composition

Rock outcrop—65 percent
Bakeoven soil and similar inclusions—30 percent
Contrasting inclusions—5 percent

Setting

Landform: Canyons and mountains
Elevation: 2,300 to 4,800 feet

Characteristics of the Rock Outcrop

Position on landscape: Steep side slopes and cliffs
Kind of rock: Exposed, hard basalt
Vegetation: None, except in fractures

Characteristics of the Bakeoven Soil

Position on landscape: Side slopes and shoulders
Climatic data (average annual):
Precipitation—12 to 16 inches
Air temperature—47 to 51 degrees F
Length of growing season—130 to 140 days
Typical profile:
0 to 3 inches—grayish brown extremely stony loam
3 to 5 inches—brown very cobbly loam
5 to 9 inches—brown very gravelly clay loam
9 inches—basalt
Depth class: Very shallow
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Very low
Restriction to rooting depth: Bedrock at a depth of 4 to 10 inches
Runoff: Very rapid
Hazard of erosion by water: Very severe

Contrasting Inclusions

- Gem very stony clay loam
- Reywat very stony loam

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, slope, available water capacity, depth to bedrock, hazard of water erosion, and stones on the surface
Dominant vegetation in potential plant community: Sandberg bluegrass and stiff sagebrush

Interpretive Groups

Capability classification: VIIs, nonirrigated
Range site: Bakeoven soil—Very Shallow, 12- to 20-inch precipitation zone

181—Rockly very stony loam, 12 to 60 percent slopes

Composition

Rockly soil and similar inclusions—75 percent
Contrasting inclusions—25 percent

Setting

Landform: Foothills and mountains
Elevation: 1,800 to 2,850 feet

Characteristics of the Rockly Soil

Position on landscape: South-facing side slopes
Climatic data (average annual):
Precipitation—16 to 18 inches
Air temperature—48 to 50 degrees F
Length of growing season—110 to 120 days
Typical profile:
0 to 2 inches—pale brown very stony loam
2 to 8 inches—yellowish brown very gravelly clay loam
8 inches—metamorphic rock
Depth class: Very shallow
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Very low
Restriction to rooting depth: Bedrock at a depth of 4 to 10 inches
Runoff: Medium to very rapid
Hazard of erosion by water: Moderate to very severe

Contrasting Inclusions

- Meland stony loam
- Riggins extremely stony loam
- Rock outcrop

Use and Management

Major use: Rangeland
Major management factors: Slope, depth to bedrock, available water capacity, stones on the surface, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and Sandberg bluegrass

Interpretive Groups

Capability classification: VIIs, nonirrigated
Range site: Very Shallow, 12- to 22-inch precipitation zone

182—Rockly-Riggins complex, 4 to 30 percent slopes

Composition

Rockly soil and similar inclusions—60 percent
Riggins soil and similar inclusions—25 percent
Contrasting inclusions—15 percent

Setting

Landform: Foothills and mountains
Elevation: 2,400 to 3,500 feet

Characteristics of the Rockly Soil

Position on landscape: Concave summits and south-facing side slopes
Climatic data (average annual):
Precipitation—16 to 20 inches
Air temperature—46 to 50 degrees F
Length of growing season—110 to 120 days
Typical profile:
0 to 3 inches—brown extremely stony loam
3 to 8 inches—yellowish brown very gravelly clay loam
8 inches—basalt
Depth class: Very shallow
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Very low
Restriction to rooting depth: Bedrock at a depth of 4 to 10 inches
Runoff: Medium or rapid
Hazard of erosion by water: Slight or moderate

Characteristics of the Riggins Soil

Position on landscape: Convex, south-facing side slopes and foot slopes
Climatic data (average annual):
Precipitation—16 to 20 inches
Air temperature—46 to 50 degrees F
Length of growing season—110 to 120 days
Typical profile:
0 to 4 inches—dark grayish brown extremely stony loam
4 to 19 inches—brown very cobbly clay loam
19 inches—basalt
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Very low
Restriction to rooting depth: Bedrock at a depth of 10 to 20 inches
Runoff: Medium or rapid
Hazard of erosion by water: Slight or moderate

Contrasting Inclusions

- Meland silt loam
- Rock outcrop

Use and Management

Major use: Rangeland
Major management factors: Stones on the surface, depth to bedrock, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Rockly soil—Sandberg bluegrass and stiff sagebrush; Riggins soil—Idaho fescue and xeric big sagebrush

Interpretive Groups

Capability classification: VIIs, nonirrigated
Range site: Rockly soil—Very Shallow, 12- to 20-inch precipitation zone; Riggins soil—Shallow Stony Loam, 16- to 22-inch precipitation zone

183—Rockly-Riggins, 30 to 65 percent slopes

Composition

Rockly soil and similar inclusions—45 percent
Riggins soil and similar inclusions—35 percent
Contrasting inclusions—20 percent

Setting

Landform: Foothills and mountains
Elevation: 3,000 to 4,500 feet

Characteristics of the Rockly Soil

Position on landscape: Convex, south-facing side slopes
Climatic data (average annual):
Precipitation—16 to 20 inches
Air temperature—46 to 50 degrees F
Length of growing season—110 to 120 days
Typical profile:
0 to 3 inches—brown extremely stony loam
3 to 8 inches—yellowish brown very gravelly clay loam
8 inches—basalt
Depth class: Very shallow
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Very low
Restriction to rooting depth: Bedrock at a depth of 4 to 10 inches
Runoff: Very rapid
Hazard of erosion by water: Very severe

Characteristics of the Riggins Soil

Position on landscape: Convex, south-facing side slopes
Climatic data (average annual):
Precipitation—16 to 20 inches
Air temperature—46 to 50 degrees F
Length of growing season—110 to 120 days
Typical profile:
0 to 4 inches—dark grayish brown extremely stony loam
4 to 19 inches—brown very cobbly clay loam
19 inches—basalt
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Very low
Restriction to rooting depth: Bedrock at a depth of 10 to 20 inches
Runoff: Very rapid
Hazard of erosion by water: Very severe

Contrasting Inclusions

- Meland silt loam
- Demasters loam
- Rock outcrop

Use and Management

Major use: Rangeland
Major management factors: Slope, stones on the surface, depth to bedrock, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Rockly soil—bluebunch wheatgrass and Sandberg bluegrass; Riggins soil—bluebunch wheatgrass and xeric big sagebrush

Interpretive Groups

Capability classification: VIIs, nonirrigated
Range site: Rockly soil—Very Shallow, 12- to 22-inch precipitation zone; Riggins soil—Shallow South Stony, 12- to 16-inch precipitation zone

184—Rockly-Rock outcrop complex, 10 to 50 percent slopes

Composition

Rockly soil and similar inclusions—60 percent
Rock outcrop—20 percent
Contrasting inclusions—20 percent

Setting

Landform: Foothills, mountains, and canyons
Elevation: 2,400 to 4,500 feet

Characteristics of the Rockly Soil

Position on landscape: South-facing side slopes
Climatic data (average annual):
Precipitation—16 to 20 inches
Air temperature—48 to 50 degrees F
Length of growing season—110 to 120 days
Typical profile:
0 to 3 inches—brown very stony loam
3 to 8 inches—yellowish brown very gravelly clay loam
8 inches—basalt
Depth class: Very shallow
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Very low
Restriction to rooting depth: Bedrock at a depth of 4 to 10 inches
Runoff: Medium to very rapid
Hazard of erosion by water: Moderate to very severe

Characteristics of the Rock Outcrop

Position on landscape: Side slopes and crests
Kind of rock: Exposed, hard basalt
Vegetation: None, except in fractures

Contrasting Inclusions

- Meland silt loam
- Riggins extremely stony loam

Use and Management

Major use: Rangeland
Major management factors: Slope, stones on the surface, depth to bedrock, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and Sandberg bluegrass

Interpretive Groups

Capability classification: VIIs, nonirrigated
Range site: Very Shallow, 12- to 22-inch precipitation zone

185—Rockly-Starveout-McDaniel association, 3 to 70 percent slopes

Composition

Rockly soil and similar inclusions—35 percent
Starveout soil and similar inclusions—25 percent
McDaniel soil and similar inclusions—25 percent
Contrasting inclusions—15 percent

Setting

Landform: Foothills, mountains, and canyons
Elevation: 1,800 to 3,600 feet

Characteristics of the Rockly Soil

Position on landscape: South-facing side slopes
Climatic data (average annual):
Precipitation—16 to 18 inches
Air temperature—46 to 48 degrees F
Length of growing season—110 to 120 days
Slope range: 10 to 70 percent
Typical profile:
0 to 3 inches—brown very stony loam
3 to 8 inches—yellowish brown very gravelly clay loam
8 inches—basalt
Depth class: Very shallow
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Very low
Restriction to rooting depth: Bedrock at a depth of 4 to 10 inches
Runoff: Medium to very rapid
Hazard of erosion by water: Moderate to very severe

Characteristics of the Starveout Soil

Position on landscape: Summits and west-facing side slopes
Climatic data (average annual):
Precipitation—16 to 18 inches
Air temperature—46 to 48 degrees F
Length of growing season—120 to 140 days
Slope range: 3 to 45 percent
Typical profile:
0 to 3 inches—grayish brown loam
3 to 11 inches—dark grayish brown clay loam
11 to 21 inches—dark yellowish brown clay loam
21 to 36 inches—brown clay loam
36 to 60 inches—strong brown clay loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: High
Restriction to rooting depth: Abrupt textural change at a depth of 2 to 4 inches
Runoff: Medium or rapid
Hazard of erosion by water: Slight or moderate

Characteristics of the McDaniel Soil

Position on landscape: Shoulders and west-facing side slopes
Climatic data (average annual):
Precipitation—16 to 18 inches
Air temperature—46 to 48 degrees F
Length of growing season—120 to 135 days
Slope range: 5 to 15 percent
Typical profile:
0 to 5 inches—brown very stony loam
5 to 10 inches—brown extremely cobbly silty clay loam
10 to 27 inches—brown extremely cobbly silty clay loam
27 to 60 inches—yellowish brown extremely cobbly silty clay loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Runoff: Medium to very rapid
Hazard of erosion by water: Moderate to very severe

Contrasting Inclusions

- Meland silt loam
- Rock outcrop

Use and Management

Major use: Rangeland
Major management factors: Slope, depth to bedrock, stones on the surface, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Rockly soil—bluebunch wheatgrass and Sandberg bluegrass; Starveout and McDaniel soils—bluebunch wheatgrass and Idaho fescue

Interpretive Groups

Capability classification: Rockly and McDaniel soils—VIIs, nonirrigated; Starveout soil—VIe, nonirrigated
Range site: Rockly soil—Very Shallow, 12- to 22-inch precipitation zone; Starveout soil—Loamy, 16- to 22-inch precipitation zone; McDaniel soil—South Slope Loamy, 16- to 22-inch precipitation zone

186—Roseberry loam, 0 to 2 percent slopes

Composition

Roseberry soil and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Outwash terraces
Elevation: 3,800 to 4,800 feet

Characteristics of the Roseberry Soil

Position on landscape: Swales
Climatic data (average annual):
Precipitation—22 to 24 inches
Air temperature—38 to 43 degrees F
Length of growing season—60 to 80 days
Typical profile:
0 to 18 inches—very dark gray loam
18 to 26 inches—light yellowish brown loam
26 to 33 inches—pale brown loamy sand
33 to 40 inches—pale brown loamy coarse sand
40 to 55 inches—dark gray sandy loam
55 to 60 inches—dark grayish brown gravelly sand
Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderately rapid
Available water capacity: Moderate
Restriction to rooting depth: Water table at a depth of 18 to 30 inches
Runoff: Slow
Hazard of erosion by water: Slight
Depth to water table: 18 to 30 inches in April through July
Frequency of flooding: Occasional

Contrasting Inclusions

- Donnel loam
- Melton loam

Use and Management

Major uses: Hayland and pastureland
Major management factors: Short growing season, wetness, and hazard of flooding

Interpretive Groups

Capability classification: IVw, irrigated and nonirrigated
Range site: Wet Meadow

187—Shellrock-Rock outcrop complex, 12 to 35 percent slopes

Composition

Shellrock soil and similar inclusions—65 percent
Rock outcrop—30 percent
Contrasting inclusions—5 percent

Setting

Landform: Mountains
Elevation: 4,200 to 6,000 feet

Characteristics of the Shellrock Soil

Position on landscape: South-facing side slopes
Climatic data (average annual):
Precipitation—24 to 28 inches
Air temperature—38 to 42 degrees F
Length of growing season—70 to 90 days
Typical profile:
0 to 10 inches—dark grayish brown loamy coarse sand
10 to 31 inches—brown loamy coarse sand
31 to 42 inches—pale brown gravelly loamy coarse sand
42 inches—weathered granite
Depth class: Deep
Drainage class: Somewhat excessively drained
Permeability: Rapid
Available water capacity: Low
Restriction to rooting depth: Bedrock at a depth of 40 to 60 inches
Runoff: Medium or rapid
Hazard of erosion by water: Moderate or severe

Characteristics of the Rock Outcrop

Position on landscape: Shoulders and crests
Kind of rock: Exposed, hard granite
Vegetation: None, except in fractures

Contrasting Inclusions

- Ligget sandy loam

Use and Management

Major use: Woodland
Major management factors: Available water capacity and hazard of water erosion
Dominant vegetation in potential plant community: Ponderosa pine, Douglas fir, bluebunch

wheatgrass, antelope bitterbrush, and pine reedgrass
Mean site index for stated species: Ponderosa pine—84; Douglas fir—80
Estimated average annual production per acre: Ponderosa pine—3,010 cubic feet of timber 0.6 inch in diameter or more at 40 years of age; Douglas fir—2,750 cubic feet of timber 0.6 inch in diameter or more at 40 years of age

Interpretive Groups

Capability classification: VIe, nonirrigated

188—Shellrock-Rock outcrop complex, 35 to 60 percent slopes

Composition

Shellrock soil and similar inclusions—65 percent
Rock outcrop—25 percent
Contrasting inclusions—10 percent

Setting

Landform: Mountains
Elevation: 4,200 to 6,000 feet

Characteristics of the Shellrock Soil

Position on landscape: South-facing side slopes
Climatic data (average annual):
Precipitation—24 to 30 inches
Air temperature—38 to 42 degrees F
Length of growing season—70 to 90 days
Typical profile:
0 to 10 inches—dark grayish brown loamy coarse sand
10 to 31 inches—brown loamy coarse sand
31 to 42 inches—pale brown gravelly loamy coarse sand
42 inches—weathered granite
Depth class: Deep
Drainage class: Somewhat excessively drained
Permeability: Rapid
Available water capacity: Low
Restriction to rooting depth: Bedrock at a depth of 40 to 60 inches
Runoff: Very rapid
Hazard of erosion by water: Severe or very severe

Characteristics of the Rock Outcrop

Position on landscape: Side slopes and crests
Kind of rock: Exposed, hard granite
Vegetation: None, except in fractures

Contrasting Inclusions

- Soils that are 20 to 40 inches deep to bedrock
- Soils that are 10 to 20 inches deep to bedrock

Use and Management

Major use: Woodland
Major management factors: Slope, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Ponderosa pine, Douglas fir, pine reedgrass, bluebunch wheatgrass, and antelope bitterbrush
Mean site index for stated species: Ponderosa pine—84; Douglas fir—80
Estimated average annual production per acre: Ponderosa pine—3,010 cubic feet of timber 0.6 inch in diameter or more at 40 years of age; Douglas fir—2,750 cubic feet of timber 0.6 inch in diameter or more at 40 years of age

Interpretive Groups

Capability classification: VIIe, nonirrigated

189—Shoepeg loam, 0 to 3 percent slopes

Composition

Shoepeg soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Stream terraces
Elevation: 2,200 to 3,500 feet

Characteristics of the Shoepeg Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—14 to 18 inches
Air temperature—50 to 54 degrees F
Length of growing season—130 to 150 days
Typical profile:
0 to 21 inches—very dark grayish brown loam
21 to 29 inches—dark grayish brown loam
29 to 48 inches—dark brown silt loam
48 to 60 inches—brown gravelly sandy loam
Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderate
Available water capacity: High
Restriction to rooting depth: Water table at a depth of 24 to 36 inches
Runoff: Slow
Hazard of erosion by water: Slight

Depth to water table: 24 to 36 inches in April through September
Frequency of flooding: Rare

Contrasting Inclusions

- Catherine silt loam
- Dagor loam
- Langrell gravelly loam
- Newell clay loam
- Onyx silt loam

Use and Management

Major use: Irrigated cropland
Major management factor: Wetness

Interpretive Groups

Capability classification: IIw, irrigated

190—Shoepeg silty clay loam, 0 to 3 percent slopes

Composition

Shoepeg soil and similar inclusions—90 percent
Contrasting inclusions—10 percent

Setting

Landform: Stream terraces
Elevation: 2,200 to 3,500 feet

Characteristics of the Shoepeg Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—14 to 18 inches
Air temperature—50 to 54 degrees F
Length of growing season—130 to 150 days
Typical profile:
0 to 26 inches—very dark gray silty clay loam
26 to 34 inches—very dark grayish brown silt loam
34 to 46 inches—very dark grayish brown clay loam
46 to 60 inches—dark brown silt loam
Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderate
Available water capacity: High
Restriction to rooting depth: Water table at a depth of 24 to 36 inches
Runoff: Slow
Hazard of erosion by water: Slight
Depth to water table: 24 to 36 inches in April through September
Frequency of flooding: Rare

Contrasting Inclusions

- Catherine silt loam
- Newell clay loam
- Langrell gravelly loam

Use and Management

Major use: Irrigated cropland
Major management factor: Wetness

Interpretive Groups

Capability classification: IIw, irrigated

191—Starveout-Gwin-McDaniel association, 3 to 45 percent slopes

Composition

Starveout soil and similar inclusions—50 percent
Gwin soil and similar inclusions—20 percent
McDaniel soil and similar inclusions—20 percent
Contrasting inclusions—10 percent

Setting

Landform: Mountains and canyons
Elevation: 2,400 to 2,900 feet

Characteristics of the Starveout Soil

Position on landscape: Foot slopes and side slopes
Climatic data (average annual):
Precipitation—16 to 20 inches
Air temperature—46 to 48 degrees F
Length of growing season—120 to 135 days
Slope range: 3 to 45 percent
Typical profile:
0 to 3 inches—grayish brown loam
3 to 11 inches—dark grayish brown clay loam
11 to 21 inches—dark yellowish brown clay loam
21 to 36 inches—brown clay loam
36 to 60 inches—strong brown clay loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: High
Restriction to rooting depth: Abrupt textural change at a depth of 2 to 4 inches
Runoff: Medium or rapid
Hazard of erosion by water: Slight or moderate

Characteristics of the Gwin Soil

Position on landscape: Side slopes and crests
Climatic data (average annual):
Precipitation—16 to 20 inches

Air temperature—46 to 48 degrees F
Length of growing season—120 to 135 days
Slope range: 10 to 30 percent
Typical profile:
0 to 5 inches—brown very stony loam
5 to 12 inches—brown extremely cobbly loam
12 to 20 inches—brown extremely cobbly clay loam
20 inches—basalt
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Very low
Restriction to rooting depth: Bedrock at a depth of 10 to 20 inches
Runoff: Medium or rapid
Hazard of erosion by water: Slight or moderate

Characteristics of the McDaniel Soil

Position on landscape: North-facing side slopes
Climatic data (average annual):
Precipitation—16 to 20 inches
Air temperature—48 to 50 degrees F
Length of growing season—120 to 135 days
Slope range: 5 to 30 percent
Typical profile:
0 to 5 inches—brown very stony loam
5 to 10 inches—brown very cobbly silty clay loam
10 to 27 inches—brown extremely cobbly silty clay loam
27 to 60 inches—yellowish brown extremely cobbly silty clay loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Runoff: Medium or rapid
Hazard of erosion by water: Slight or moderate

Contrasting Inclusions

- Meland silt loam
- Rock outcrop

Use and Management

Major use: Rangeland
Major management factors: Slope, stones on the surface, depth to bedrock, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Starveout and Gwin soils—bluebunch wheatgrass and Idaho fescue; McDaniel soil—Idaho fescue and common snowberry

Interpretive Groups

Capability classification: Starveout soil—VIe, nonirrigated; Gwin soil—VIIs, nonirrigated; McDaniel soil—VIs, nonirrigated
Range site: Starveout soil—Loamy, 16- to 22-inch precipitation zone; Gwin soil—Shallow Stony, 16- to 22-inch precipitation zone; McDaniel soil—North Slope Loamy, 16- to 22-inch precipitation zone

192—Sudpeak loam, 3 to 20 percent slopes

Composition

Sudpeak soil and similar inclusions—85 percent
Contrasting inclusions—15 percent

Setting

Landform: Alluvial fans
Elevation: 3,800 to 4,200 feet

Characteristics of the Sudpeak Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—22 to 25 inches
Air temperature—36 to 40 degrees F
Length of growing season—50 to 80 days
Typical profile:
0 to 18 inches—dark grayish brown loam
18 to 28 inches—brown clay loam
28 to 40 inches—brown silty clay loam
40 to 60 inches—light yellowish brown silty clay loam
Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Slow
Available water capacity: High
Restriction to rooting depth: Water table at a depth of 36 to 60 inches
Runoff: Slow or medium
Hazard of erosion by water: Slight or moderate
Depth to water table: 36 to 60 inches in May through July

Contrasting Inclusions

- Blackwell clay loam
- Bluebell cobbly loam
- Cabarton silty clay loam
- Gestrin loam
- Swede loam
- Ticanot very cobbly loam

Use and Management

Major use: Rangeland
Major management factor: Hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and Idaho fescue

Interpretive Groups

Capability classification: IVe, nonirrigated
Range site: Loamy, 22+-inch precipitation zone

193—Swede loam, 4 to 12 percent slopes

Composition

Swede soil and similar inclusions—85 percent
Contrasting inclusions—15 percent

Setting

Landform: Alluvial fans
Elevation: 4,100 to 5,200 feet

Characteristics of the Swede Soil

Position on landscape: Summits and side slopes
Climatic data (average annual):
Precipitation—24 to 27 inches
Air temperature—39 to 43 degrees F
Length of growing season—60 to 75 days
Typical profile:
0 to 24 inches—brown loam
24 to 40 inches—brown clay loam
40 to 52 inches—light yellowish brown clay loam
52 to 60 inches—yellowish brown gravelly clay loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: High
Runoff: Medium
Hazard of erosion by water: Slight or moderate

Contrasting Inclusions

- Bluebell cobbly loam
- Demast loam
- Sudpeak loam
- Ticanot very cobbly loam
- Soils that are 40 to 60 inches deep to bedrock and have more than 35 percent rock fragments

Use and Management

Major uses: Woodland, hayland, and pastureland
Major management factors: Short growing season, slope, and hazard of water erosion
Dominant vegetation in potential plant community: Ponderosa pine, pine reedgrass, elk sedge, and common snowberry
Mean site index for stated species: Ponderosa pine—87
Estimated average annual production per acre: Ponderosa pine—3,400 cubic feet of timber 0.6 inch in diameter or more at 40 years of age

Interpretive Groups

Capability classification: IVe, nonirrigated

194—Tamred loam, 20 to 60 percent slopes

Composition

Tamred soil and similar inclusions—85 percent
Contrasting inclusions—15 percent

Setting

Landform: Mountains
Elevation: 4,600 to 5,300 feet

Characteristics of the Tamred Soil

Position on landscape: South-facing side slopes
Climatic data (average annual):
Precipitation—25 to 35 inches
Air temperature—38 to 42 degrees F
Length of growing season—60 to 80 days
Typical profile:
2 inches to 0—decomposed organic matter
0 to 3 inches—reddish brown loam
3 to 7 inches—reddish brown gravelly loam
7 to 21 inches—yellowish red extremely cobbly clay loam
21 to 30 inches—fractured basalt
30 inches—basalt
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Very low
Restriction to rooting depth: Bedrock at a depth of 20 to 40 inches
Runoff: Rapid or very rapid
Hazard of erosion by water: Moderate or severe

Contrasting Inclusions

- Brody loam
- Ticanot very cobbly loam

Use and Management

Major use: Woodland
Major management factors: Slope, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Douglas fir, ponderosa pine, Oregongrape, pine reedgrass, snowbrush, huckleberry, and Indian paintbrush
Mean site index for stated species: Ponderosa pine—80
Estimated average annual production per acre: Ponderosa pine—2,750 cubic feet of timber 0.6 inch in diameter or more at 40 years of age

Interpretive Groups

Capability classification: VIIs, nonirrigated

195—Ticanot very cobbly loam, 4 to 65 percent slopes

Composition

Ticanot soil and similar inclusions—85 percent
Contrasting inclusions—15 percent

Setting

Landform: Mountains
Elevation: 3,800 to 6,000 feet

Characteristics of the Ticanot Soil

Position on landscape: Summits, shoulders, and side slopes
Climatic data (average annual):
Precipitation—22 to 26 inches
Air temperature—38 to 42 degrees F
Length of growing season—65 to 75 days
Typical profile:
0 to 5 inches—brown very cobbly loam
5 to 11 inches—brown very cobbly clay loam
11 to 15 inches—dark brown very cobbly clay
15 inches—basalt
Depth class: Shallow
Drainage class: Well drained
Permeability: Slow
Available water capacity: Very low
Restriction to rooting depth: Bedrock at a depth of 10 to 20 inches
Runoff: Medium to very rapid
Hazard of erosion by water: Moderate to very severe

Contrasting Inclusions

- Bluebell cobbly loam
- Demast loam

Use and Management

Major use: Rangeland
Major management factors: Slope, depth to bedrock, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Idaho fescue and mountain big sagebrush with scattered ponderosa pine

Interpretive Groups

Capability classification: VIIe, nonirrigated
Range site: Fractured Stony Loam, 22+-inch precipitation zone

196—Tindahay-Cashmere complex, 2 to 4 percent slopes

Composition

Tindahay soil and similar inclusions—75 percent
Cashmere soil and similar inclusions—15 percent
Contrasting inclusions—10 percent

Setting

Landform: Fan terraces
Elevation: 2,100 to 2,500 feet

Characteristics of the Tindahay Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—50 to 52 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 12 inches—pale brown and brown loamy coarse sand
12 to 17 inches—brown sandy loam
17 to 28 inches—pale brown loamy coarse sand
28 to 60 inches—pale brown coarse sand
Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability: Moderately rapid
Available water capacity: Low
Runoff: Slow
Hazard of erosion by water: Slight

Characteristics of the Cashmere Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 51 degrees F
Length of growing season—150 to 155 days

Typical profile:
0 to 11 inches—grayish brown sandy loam
11 to 25 inches—brown sandy loam
25 to 60 inches—pale brown sandy loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Moderate
Runoff: Slow
Hazard of erosion by water: Slight

Contrasting Inclusions

- Harpt loam
- Lolalita sandy loam

Use and Management

Major use: Irrigated cropland
Major management factor: Available water capacity

Interpretive Groups

Capability classification: IIIe, irrigated

197—Tindahay-Cashmere complex, 4 to 8 percent slopes

Composition

Tindahay soil and similar inclusions—75 percent
Cashmere soil and similar inclusions—15 percent
Contrasting inclusions—10 percent

Setting

Landform: Fan terraces
Elevation: 2,100 to 2,500 feet

Characteristics of the Tindahay Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—50 to 52 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 12 inches—pale brown and brown loamy coarse sand
12 to 17 inches—brown sandy loam
17 to 28 inches—pale brown loamy coarse sand
28 to 60 inches—pale brown coarse sand
Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability: Moderately rapid
Available water capacity: Low
Runoff: Medium
Hazard of erosion by water: Slight

Characteristics of the Cashmere Soil

Position on landscape: Fan terraces
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 51 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 11 inches—grayish brown sandy loam
11 to 25 inches—brown sandy loam
25 to 60 inches—pale brown sandy loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Moderate
Runoff: Medium
Hazard of erosion by water: Slight

Contrasting Inclusions

- Harpt loam
- Haw silt loam
- Lolalita sandy loam

Use and Management

Major use: Irrigated cropland
Major management factors: Slope and available water capacity

Interpretive Groups

Capability classification: IVe, irrigated

198—Tindahay-Cashmere complex, 8 to 12 percent slopes

Composition

Tindahay soil and similar inclusions—70 percent
Cashmere soil and similar inclusions—25 percent
Contrasting inclusions—5 percent

Setting

Landform: Fan terraces
Elevation: 2,100 to 2,500 feet

Characteristics of the Tindahay Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—50 to 52 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 12 inches—pale brown and brown loamy coarse sand

12 to 17 inches—brown sandy loam
17 to 28 inches—pale brown loamy coarse sand
28 to 60 inches—pale brown coarse sand
Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability: Moderately rapid
Available water capacity: Low
Runoff: Medium
Hazard of erosion by water: Moderate

Characteristics of the Cashmere Soil

Position on landscape: Summits
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 51 degrees F
Length of growing season—150 to 155 days
Typical profile:
0 to 11 inches—grayish brown sandy loam
11 to 25 inches—brown sandy loam
25 to 60 inches—pale brown sandy loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Moderate
Runoff: Medium
Hazard of erosion by water: Moderate

Contrasting Inclusions

- Lolalita sandy loam

Use and Management

Major use: Irrigated cropland
Major management factors: Slope, available water capacity, and hazard of water erosion

Interpretive Groups

Capability classification: IVe, irrigated

199—Typic Xerofluvents, cobbly, 4 to 40 percent slopes

Composition

Typic Xerofluvents and similar inclusions—95 percent
Contrasting inclusions—5 percent

Setting

Landform: Stream terraces
Elevation: 2,800 to 3,000 feet

Characteristics of the Typic Xerofluvents

Position on landscape: Summits and side slopes
Climatic data (average annual):
Precipitation—24 to 28 inches
Air temperature—42 to 48 degrees F
Length of growing season—80 to 120 days
Sample profile:
0 to 10 inches—light brownish gray extremely cobbly sand
10 to 60 inches—multicolored, stratified cobbles, pebbles, and sand with some fine-textured material
Depth class: Very deep
Drainage class: Excessively drained
Permeability: Very rapid
Available water capacity: Very low
Runoff: Medium or rapid
Hazard of erosion by water: Moderate or severe

Contrasting Inclusions

- Soils that are wet

Use and Management

Major use: Nonirrigated cropland
Major management factors: Slope, rock fragments on the surface, depth to sand and gravel, available water capacity, and hazard of water erosion

Interpretive Groups

Capability classification: VIIs, nonirrigated

200—Van Dusen-Haw complex, 30 to 65 percent slopes

Composition

Van Dusen soil and similar inclusions—55 percent
Haw soil and similar inclusions—40 percent
Contrasting inclusions—5 percent

Setting

Landform: Dissected lacustrine terraces
Elevation: 2,400 to 3,500 feet

Characteristics of the Van Dusen Soil

Position on landscape: North-facing side slopes
Climatic data (average annual):
Precipitation—12 to 14 inches
Air temperature—45 to 49 degrees F
Length of growing season—130 to 140 days
Typical profile:
0 to 14 inches—dark grayish brown loam
14 to 20 inches—dark grayish brown loam
20 to 32 inches—grayish brown and brown sandy clay loam
32 to 48 inches—brown loam
48 to 60 inches—brown sandy loam
Depth class: Very deep

Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: High
Runoff: Very rapid
Hazard of erosion by water: Very severe

Characteristics of the Haw Soil

Position on landscape: South-facing side slopes
Climatic data (average annual):
Precipitation—12 to 13 inches
Air temperature—48 to 51 degrees F
Length of growing season—130 to 140 days
Typical profile:
0 to 17 inches—grayish brown silt loam
17 to 26 inches—brown clay loam
26 to 38 inches—pale brown clay loam
38 to 60 inches—very pale brown coarse sandy loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Runoff: Very rapid
Hazard of erosion by water: Very severe

Contrasting Inclusions

- Lolalita sandy loam
- Payette coarse sandy loam

Use and Management

Major use: Rangeland
Major management factors: Low precipitation, slope, and hazard of water erosion
Dominant vegetation in potential plant community: Bluebunch wheatgrass and xeric big sagebrush

Interpretive Groups

Capability classification: VIIe, nonirrigated
Range site: Van Dusen soil—North Slope Loamy, 12- to 16-inch precipitation zone; Haw soil—Loamy, 12- to 16-inch precipitation zone

201—Wapshilla loam, 30 to 60 percent slopes

Composition

Wapshilla soil and similar inclusions—85 percent
Contrasting inclusions—15 percent

Setting

Landform: Mountains
Elevation: 3,500 to 5,000 feet

Characteristics of the Wapshilla Soil

Position on landscape: North-facing side slopes
Climatic data (average annual):
Precipitation—26 to 28 inches
Air temperature—42 to 44 degrees F
Length of growing season—60 to 80 days
Typical profile:
1 inch to 0—decomposed organic matter
0 to 10 inches—dark brown loam
10 to 21 inches—brown gravelly loam
21 to 25 inches—yellowish brown very gravelly loam
25 to 60 inches—brown very gravelly clay loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Low
Runoff: Very rapid
Hazard of erosion by water: Very severe

Contrasting Inclusions

- Bluebell cobbly loam
- Klickson silt loam
- Ticanot very cobbly loam

Use and Management

Major use: Woodland
Major management factors: Slope, available water capacity, and hazard of water erosion
Dominant vegetation in potential plant community: Grand fir, Douglas fir, ponderosa pine, swordfern, northern twinflower, and myrtle pachystima
Mean site index for stated species: Grand fir—56; Douglas fir—101
Estimated average annual production per acre: Grand fir—11,150 cubic feet of timber 0.6 inch in diameter or more at 80 years of age; Douglas fir—4,100 cubic feet of timber 0.6 inch in diameter or more at 40 years of age

Interpretive Groups

Capability classification: VIIe, nonirrigated

Prime Farmland

Prime farmland is one of several kinds of important farmland defined by the U.S. Department of Agriculture. It is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forest land, or other land, but it is not urban or built-up land or water areas. The soil qualities, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. It is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. The slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

About 135,951 acres, or nearly 12 percent of the survey area, would meet the requirements for prime farmland if an adequate and dependable supply of irrigation water were available.

The map units in the survey area that are considered prime farmland are listed in this section. This list does not constitute a recommendation for a particular land use. On some soils included in the list, measures that overcome a hazard or limitation, such as flooding, wetness, or droughtiness, are needed. The extent of each listed map unit is shown in table 4. The location of each map unit is shown on the detailed soil maps at the back of this publication. Soil qualities that affect use and management are described in the section "Detailed Soil Map Units."

The map units that meet the requirements for prime farmland are:

1 Abo silt loam, 0 to 2 percent slopes (if irrigated)
6 Appledellia loam, 2 to 4 percent slopes
7 Appledellia loam, 4 to 8 percent slopes
11 Appledellia-Odermott complex, 2 to 4 percent slopes
12 Appledellia-Odermott complex, 4 to 8 percent slopes
15 Baldock silt loam, 0 to 2 percent slopes (if irrigated)
16 Baldock clay loam, 0 to 2 percent slopes (if irrigated)
17 Bissell loam, 0 to 2 percent slopes (if irrigated)
18 Bissell loam, 2 to 4 percent slopes (if irrigated)
24 Brownlee sandy loam, 4 to 8 percent slopes
27 Brownlee loam, 1 to 4 percent slopes
30 Cashmere sandy loam, 2 to 4 percent slopes (if irrigated)
31 Cashmere sandy loam, 4 to 8 percent slopes (if irrigated)
32 Catherine silt loam, 0 to 3 percent slopes (if drained)
34 Clems fine sandy loam, 0 to 2 percent slopes (if irrigated)
35 Clems fine sandy loam, 2 to 4 percent slopes (if irrigated)
39 Dagor loam, 2 to 4 percent slopes
45 Deshler silty clay loam, 2 to 8 percent slopes
55 Deshler-Brownlee complex, 2 to 8 percent slopes
65 Elijah silt loam, 4 to 8 percent slopes (if irrigated)
67 Falk fine sandy loam, 0 to 2 percent slopes (if irrigated)
77 Glasgow clay loam, 2 to 4 percent slopes (if irrigated)
82 Greenleaf silt loam, 0 to 2 percent slopes (if irrigated)
83 Greenleaf silt loam, 2 to 4 percent slopes (if irrigated)

84 Greenleaf silt loam, 4 to 8 percent slopes (if irrigated)
91 Harpt loam, 2 to 4 percent slopes (if irrigated)
92 Harpt loam, 4 to 8 percent slopes (if irrigated)
93 Haw silt loam, 4 to 8 percent slopes (if irrigated)
97 Jacknife loam, 1 to 4 percent slopes
98 Jacknife loam, 4 to 8 percent slopes
102 Jenny clay, 0 to 2 percent slopes (if irrigated)
110 Langrell loam, 0 to 2 percent slopes (if irrigated)
111 Langrell gravelly loam, 0 to 3 percent slopes (if irrigated)
112 Lankbush sandy loam, 2 to 4 percent slopes (if irrigated)
113 Lankbush sandy loam, 4 to 8 percent slopes (if irrigated)
116 Lanktree loam, 0 to 2 percent slopes (if irrigated)
118 Lanktree clay loam, 4 to 8 percent slopes (if irrigated)
123 Lolalita sandy loam, 4 to 8 percent slopes (if irrigated)
133 Meland silt loam, 4 to 8 percent slopes
141 Midvale silty clay loam, 0 to 2 percent slopes
142 Midvale silty clay loam, 2 to 4 percent slopes
143 Midvale silty clay loam, 4 to 8 percent slopes
146 Midvale-Demoss complex, 2 to 4 percent slopes
150 Moulton fine sandy loam, 0 to 3 percent slopes (if drained)
151 Moulton loam, 0 to 3 percent slopes (if drained)
152 Moulton-Falk fine sandy loams, 0 to 3 percent slopes (if drained)
155 Newell clay loam, 0 to 2 percent slopes
156 Newell clay loam, 2 to 4 percent slopes
157 Newell clay loam, 4 to 8 percent slopes
160 Nyssaton silt loam, 0 to 2 percent slopes (if irrigated)
163 Onyx silt loam, 0 to 3 percent slopes
164 Owyhee silt loam, 0 to 2 percent slopes (if irrigated)
165 Owyhee silt loam, 2 to 4 percent slopes (if irrigated)
166 Owyhee silt loam, 4 to 8 percent slopes (if irrigated)
169 Paniogue loam, 0 to 2 percent slopes (if irrigated)
173 Power-Purdam silt loams, 0 to 2 percent slopes (if irrigated)
174 Power-Purdam silt loams, 2 to 4 percent slopes (if irrigated)
175 Power-Purdam silt loams, 4 to 8 percent slopes (if irrigated)
189 Shoepeg loam, 0 to 3 percent slopes
190 Shoepeg silty clay loam, 0 to 3 percent slopes
196 Tindahay-Cashmere complex, 2 to 4 percent slopes (if irrigated)
197 Tindahay-Cashmere complex, 4 to 8 percent slopes (if irrigated)

Use and Management of the Soils

This soil survey is an inventory and evaluation of the soils in the survey area. It can be used to adjust land uses to the limitations and potentials of natural resources and the environment. Also, it can help to prevent soil-related failures in land uses.

In preparing a soil survey, soil scientists, conservationists, engineers, and others collect extensive field data about the nature and behavioral characteristics of the soils. They collect data on erosion, droughtiness, flooding, and other factors that affect various soil uses and management. Field experience and collected data on soil properties and performance are used as a basis in predicting soil behavior.

Information in this section can be used to plan the use and management of soils for crops and pasture; as rangeland and woodland; as sites for buildings, sanitary facilities, highways and other transportation systems, and parks and other recreational facilities; and for wildlife habitat. It can be used to identify the potentials and limitations of each soil for specific land uses and to help prevent construction failures caused by unfavorable soil properties.

Planners and others using soil survey information can evaluate the effect of specific land uses on productivity and on the environment in all or part of the survey area. The survey can help planners to maintain or create a land use pattern in harmony with the natural soil.

Contractors can use this survey to locate sources of sand and gravel, roadfill, and topsoil. They can use it to identify areas where bedrock, wetness, or very firm soil layers can cause difficulty in excavation.

Health officials, highway officials, engineers, and others may also find this survey useful. The survey can help them plan the safe disposal of wastes and locate sites for pavements, sidewalks, campgrounds, playgrounds, lawns, and trees and shrubs.

Crops and Pasture

General management needed for crops and pasture is suggested in this section. The estimated yields of the main crops and pasture plants are listed for each soil and the system of land capability classification used by the Natural Resources Conservation Service is explained.

Planners of management systems for individual fields or farms should consider the detailed information given in the description of each soil under the heading "Detailed Soil Map Units." Specific information can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

The survey area has about 195,825 acres of cropland, hayland, and pastureland. In Adams County there are about 39,250 acres of hayland and pastureland. In Washington County there are about 25,900 acres of nonirrigated cropland, 49,200 acres of irrigated cropland, and 81,475 acres of hayland and pastureland.

Most of the farms and ranches in Adams County are a combination of farming and livestock operations. Hay and pasture are used as feed for the livestock. Periodically, small grain is grown in preparation for seeding of hay or pasture. In New Meadows Valley, growth of small grain is marginal because of the limited growing season.

Washington County supports a wide range of farming operations. In Cambridge Valley, operations are similar to those in Adams County with the addition of some small grain. Precipitation is sufficient for annual cropping of small grain. Some irrigated corn is grown for silage. In the southern part of Washington County, along the Snake and Weiser Rivers, highly intensive row cropping is used. Beans, fruit orchards, grapes, onions, potatoes, sugar beets, and vegetables for seeds are grown in addition to small grain, hay, and pasture. Some cantaloupe, pumpkins, strawberries, squash, and watermelon and a few vegetable crops are grown for commercial use. In recent years safflower has been grown as an oil crop. Adjacent to the main irrigated areas are areas of small grain grown in a summer fallow-small grain rotation. The extent of these areas is small, however, because either irrigation water is available or precipitation is adequate for annual cropping in most areas.

Much of the irrigated soils are level or gently sloping. Soil erosion is a concern on soils that have slopes of more than 2 percent and are surface irrigated.

Land leveling and using irrigation structures and improved irrigation systems help to reduce the risk of erosion. Crop rotations that include hay or pasture increase the organic matter content and thus improve soil tilth and fertility.

Loss of the surface layer through erosion is a serious concern on the gently sloping to moderately steep soils. As the surface layer is lost, part of the subsoil is incorporated into the plow layer and productivity is reduced. Loss of the surface layer is especially damaging to the shallow Demoss and Dishner soils and the moderately deep Appledellia, Chilcott, Cranecreek, Deshler, Elijah, Gem, Glasgow, Meland, Purdam, and Vickery soils. Soil erosion can result in the sedimentation of streams, reducing the water quality.

Erosion control measures are designed to reduce runoff and increase water infiltration, and they are essential to good management. A cropping system that maintains a plant cover on the surface helps to reduce soil losses. Use of minimum tillage, no-till farming, and other practices that limit tillage help to reduce compaction and maintain soil tilth. Maintaining 1,500 pounds of crop residue on the surface per acre during the critical erosion period also reduces runoff and erosion. Information on the design of erosion control measures is available at the local office of the Natural Resources Conservation Service.

Sprinkler and surface irrigation systems are used in the survey area. Applications of water should be adjusted to the available water capacity, the water intake rate, and the needs of the crop grown. A few soils along streams need to be protected from flooding, and water should be applied carefully to avoid raising the level of the water table in these soils.

Cultivated crops, hay, and pasture generally respond well to applications of fertilizer. Regular additions of crop residue and manure, if available, can help to maintain or increase the organic matter content and improve the soil structure. The addition of fertilizer should be based on the results of soil tests, the needs of the crop grown, and the expected yields. On nonirrigated soils, the available moisture content should be considered in determining the rate of application of fertilizer.

Yields per Acre

The average yields per acre that can be expected of the principal crops under a high level of management are shown in table 5. In any given year, yields may be higher or lower than those indicated in the table because of variations in rainfall and other climatic factors.

The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby counties and results of field trials and demonstrations are also considered.

The management needed to obtain the indicated yields of the various crops depends on the kind of soil and the crop. Management can include drainage, erosion control, and protection from flooding; the proper planting and seeding rates; suitable high-yielding crop varieties; appropriate and timely tillage; control of weeds, plant diseases, and harmful insects; favorable soil reaction and optimum levels of nitrogen, phosphorus, potassium, and trace elements for each crop; effective use of crop residue, barnyard manure, and green manure crops; and harvesting that ensures the smallest possible loss.

For yields of irrigated crops, it is assumed that the irrigation system is adapted to the soils and to the crops grown, that good-quality irrigation water is uniformly applied as needed, and that tillage is kept to a minimum.

The estimated yields reflect the productive capacity of each soil for each of the principal crops. Yields are likely to increase as new production technology is developed. The productivity of a given soil compared with that of other soils, however, is not likely to change.

Crops other than those shown in the table are grown in the survey area, but estimated yields are not listed because the acreage of such crops is small. The local office of the Natural Resources Conservation Service or of the Cooperative Extension Service can provide information about the management and productivity of the soils for those crops.

Land Capability Classification

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops *(7)*. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they

include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for rangeland, for woodland, and for engineering purposes.

In the capability system, soils are generally grouped at three levels—capability class, subclass, and unit. Only class and subclass are used in this survey.

Capability classes, the broadest groups, are designated by numerals I through VIII. The numerals indicate progressively greater limitations and narrower choices for practical use. The classes are defined as follows:

Class I soils have few limitations that restrict their use.

Class II soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.

Class III soils have severe limitations that reduce the choice of plants or that require special conservation practices, or both.

Class IV soils have very severe limitations that reduce the choice of plants or that require very careful management, or both.

Class V soils are not likely to erode but have other limitations, impractical to remove, that limit their use.

Class VI soils have severe limitations that make them generally unsuitable for cultivation.

Class VII soils have very severe limitations that make them unsuitable for cultivation.

Class VIII soils and miscellaneous areas have limitations that nearly preclude their use for commercial crop production.

Capability subclasses are soil groups within one class. They are designated by adding a small letter, *e, w, s,* or *c,* to the class numeral, for example, IIe. The letter *e* shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained; *w* shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); *s* shows that the soil is limited mainly because it is shallow, droughty, or stony; and *c,* used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

In class I there are no subclasses because the soils of this class have few limitations. Class V contains only the subclasses indicated by *w, s,* or *c* because the soils in class V are subject to little or no erosion. They have other limitations that restrict their use to pasture, rangeland, woodland, wildlife habitat, or recreation.

The capability classification of each map unit is given in the section "Detailed Soil Map Units."

Rangeland

By James A. Cornwell, area range conservationist, Natural Resources Conservation Service, Boise, Idaho.

There are approximately 862,000 acres of rangeland in the survey area. Of this, about 177,000 acres in Adams County and 414,000 acres in Washington County is privately owned land and 271,000 acres is Federal land that is administered by the Bureau of Land Management.

The rangeland is used for livestock grazing, wildlife habitat, and recreation, and it provides valuable watershed for the Weiser and Payette Rivers, which drain into the Snake River. Cow-calf operations are dominant on the ranches, but some calves are held over or purchased to be sold later as yearlings. A few sheep are raised in the area. The average operation consists of 1,500 acres of deeded land supplemented with grazing by permit on Federal rangeland. The grazing season generally extends from mid-April through mid-November. Calving usually occurs in January through March. About 70 percent of the agricultural income in the survey area, excluding timber, comes from the sale of livestock products.

Since the late 1800's, the natural vegetation on much of the rangeland has been greatly reduced by the continued grazing early in spring. In the early years, large numbers of sheep, horses, and cattle used the rangeland. Much of the Idaho fescue and bluebunch wheatgrass, which originally covered the rangeland, has been replaced by annual bromegrass, medusahead wildrye, annual forbs, and sod-forming bluegrass.

The shift in vegetation types also allowed for an increase in brush species, primarily sagebrush. The shift from perennial bunchgrasses to annual grasses has resulted in an increase in the yearly fluctuation in yields because growth of annual grasses depends more on the amount and time of precipitation than does growth of perennial grasses.

In areas that have similar climate and topography, differences in the kind and amount of vegetation produced on rangeland are closely related to the kind of soil. Effective management is based on the

relationship between the soils and vegetation and water.

Table 6 shows, for each soil that supports rangeland vegetation suitable for grazing, the range site; the total annual production of vegetation in favorable, normal, and unfavorable years; the characteristic vegetation; and the average percentage of each species. An explanation of the column headings in the table follows.

A *range site* is a distinctive kind of rangeland that produces a characteristic natural plant community that differs from natural plant communities on other range sites in kind, amount, and proportion of range plants. The relationship between soils and vegetation was ascertained during this survey; thus, range sites generally can be determined directly from the soil map. Soil properties that affect moisture supply and plant nutrients have the greatest influence on the productivity of range plants. Soil reaction, salt content, and a seasonal high water table are also important.

Each range site is named using general soil or topographic connotations and mean annual precipitation. A range site number also is used to identify the range site. The number precedes the name in the table. Range site numbers are used primarily to coordinate range sites within and between states. *010ay019i* is an example. This identifies the range site as located in major land resource area *010*, subdivision *a* (if a subdivision is not given, an *x* will appear in this position). Some states make a further subdivision of the resource areas. Because Idaho does not, a *y* will always appear in the next position in the range site name. The *019* is the coordinated range site number. The letter *i* represents the state of Idaho. Land resource area subdivision maps are available at the local office of the Natural Resources Conservation Service.

Total production is the amount of vegetation that can be expected to grow annually on well managed rangeland that is supporting the potential plant community. It includes all vegetation, whether or not it is palatable to grazing animals. It includes the current year's growth of leaves, twigs, and fruits of woody plants. It does not include the increase in stem diameter of trees and shrubs. It is expressed in pounds per acre of air-dry vegetation for favorable, normal, and unfavorable years. In a favorable year, the amount and distribution of precipitation and the temperatures make growing conditions substantially better than average. In a normal year, growing conditions are about average. In an unfavorable year, growing conditions are well below average, generally because of low available soil moisture.

Dry weight is the total annual yield per acre of air-dry vegetation. Yields are adjusted to a common percent of air-dry moisture content. The relationship of green weight to air-dry weight varies according to such factors as exposure, amount of shade, recent rains, and unseasonable dry periods.

Characteristic vegetation—the grasses, forbs, and shrubs that make up most of the potential plant community on each soil—is listed by common name. Under *composition*, the expected percentage of the total annual production is given for each species making up the characteristic vegetation. The amount that can be used as forage depends on the kinds of grazing animals and on the grazing season.

Range management requires a knowledge of the kinds of soil and of the potential plant community. It also requires an evaluation of the present range condition. Range condition is determined by comparing the present plant community with the potential plant community on a particular range site. The more closely the existing community resembles the potential community, the better the range condition. Range condition is an ecological rating only.

The objective in range management is to control grazing so that the plants growing on a site are about the same in kind and amount as the potential plant community for that site. Such management generally results in the optimum production of vegetation, control of undesirable brush species, conservation of water, and control of erosion. Sometimes, however, a range condition somewhat below the potential meets grazing needs, provides wildlife habitat, and protects soil and water resources.

Woodland Management and Productivity

About 89,500 acres of the survey area are woodland, of which 77,850 acres are in Adams County and 11,650 acres are in Washington County. The location, extent, and species are directly related to the amount of precipitation received. Aspect and elevation are the main factors that influence precipitation. The areas of woodland are mainly on the steeper soils.

At the lower elevations, or at about 3,500 feet, trees are on the north-facing slopes. Ponderosa pine is at the lower elevations, but as elevation increases Douglas-fir becomes established. Ponderosa pine also is on stream bottoms farther north at elevations of about 3,000 feet and on south-facing slopes in areas that receive higher amounts of precipitation. Grand fir is on north-facing slopes at elevations of about 4,000 feet and above. In Washington County, woodland occurs mainly on the north-facing slopes. In Adams County,

the number of trees increases with elevation until at New Meadows, trees are on all slopes.

Most of the tree-covered areas have been logged at lease once. Throughout these areas are roads and skid trails from past logging, many of which need to be maintained by seeding adapted plant species and providing water bars to prevent erosion. New roads and skid trails need to be carefully planned and constructed to prevent excessive erosion.

A brief description of the soils used as woodland and general management considerations are given in the section "Detailed Soil Map Units." Maximum average annual growth is also given for one or more species. These growth figures are based on data from yield tables and are ascertained by using the appropriate site index curves for each tree species. Western white pine yield tables *(6)* were used to determine yields for grand fir, and ponderosa pine yield tables *(4)* were used to determine yields for Douglas fir. Where more than one species is given for a soil, the growth figures are not accumulative. Instead, they represent the potential maximum average annual growth if only one tree species was present.

Woodland Understory Vegetation

Understory vegetation consists of grasses, forbs, shrubs, and other plants. If well managed, some woodland can produce enough understory vegetation to support grazing of livestock or wildlife, or both, without damage to the trees.

The quantity and quality of understory vegetation vary with the kind of soil, the age and kind of trees in the canopy, the density of the canopy, and the depth and condition of the litter. The density of the canopy determines the amount of light that understory plants receive.

Windbreaks and Environmental Plantings

Windbreaks protect livestock, buildings, and yards from wind and snow. They also protect fruit trees and gardens, and they furnish habitat for wildlife. Several rows of low- and high-growing broadleaf and coniferous trees and shrubs provide the most protection.

Field windbreaks are narrow plantings made at right angles to the prevailing wind and at specific intervals across the field. The interval depends on the erodibility of the soil. Field windbreaks protect cropland and crops from wind, help to keep snow on the fields, and provide food and cover for wildlife.

Environmental plantings help to beautify and screen houses and other buildings and to abate noise. The plants, mostly evergreen shrubs and trees, are closely spaced. To ensure plant survival, a healthy planting stock of suitable species should be planted properly on a well prepared site and maintained in good condition.

Table 7 shows the height that locally grown trees and shrubs are expected to reach in 20 years on various soils. The estimates in the table are based on measurements and observation of established plantings that have been given adequate care. They can be used as a guide in planning windbreaks and screens. Additional information on planning windbreaks and screens and planting and caring for trees and shrubs can be obtained from the local office of the Natural Resources Conservation Service or of the Cooperative Extension Service or from a commercial nursery.

Recreation

The soils of the survey area are rated in table 8 according to limitations that affect their suitability for recreation. The ratings are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation are also important. Soils subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

In the table, the degree of soil limitation is expressed as slight, moderate, or severe. *Slight* means that soil properties are generally favorable and that limitations are minor and easily overcome. *Moderate* means that limitations can be overcome or alleviated by planning, design, or special maintenance. *Severe* means that soil properties are unfavorable and that limitations can be offset only by costly soil reclamation, special design, intensive maintenance, limited use, or a combination of these measures.

The information in the table can be supplemented by other information in this survey, for example, interpretations for septic tank absorption fields in table 10 and interpretations for dwellings without basements and for local roads and streets in table 9.

Camp areas require site preparation, such as

shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The best soils have mild slopes and are not wet or subject to flooding during the period of use. The surface has few or no stones or boulders, absorbs rainfall readily but remains firm, and is not dusty when dry. Strong slopes and stones or boulders can greatly increase the cost of constructing campsites.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The best soils for picnic areas are firm when wet, are not dusty when dry, are not subject to flooding during the period of use, and do not have slopes or stones or boulders that increase the cost of shaping sites or of building access roads and parking areas.

Playgrounds require soils that can withstand intensive foot traffic. The best soils are almost level and are not wet or subject to flooding during the season of use. The surface is free of stones and boulders, is firm after rains, and is not dusty when dry. If grading is needed, the depth of the soil over bedrock or a hardpan should be considered.

Paths and trails for hiking and horseback riding should require little or no cutting and filling. The best soils are not wet, are firm after rains, are not dusty when dry, and are not subject to flooding more than once a year during the period of use. They have moderate slopes and few or no stones or boulders on the surface.

Golf fairways are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. The best soils for use as golf fairways are firm when wet, are not dusty when dry, and are not subject to prolonged flooding during the period of use. They have moderate slopes and no stones or boulders on the surface. The suitability of the soil for tees or greens is not considered in rating the soils.

Wildlife Habitat

By Frank J. Fink, Jr., state wildlife biologist, Natural Resources Conservation Service, Boise, Idaho.

This section relates the general soil map units in this survey to the expected occurrence of certain wildlife species. The wildlife in an area typically is related to the vegetation. Vegetation is closely related to the soil and the capability of the soil to produce herbaceous and woody plants. The survey area supports a variety of game and nongame fish and wildlife. Resident species include mammals, birds, reptiles, amphibians, and fish. Migratory birds use the area seasonally.

The wide array of wildlife in Adams and Washington Counties is a result of the varied habitats. The higher elevation forested areas support pine, fir, and aspen. The understory vegetation may include serviceberry, ceanothus, and ninebark. Expanses of sagebrush, bitterbrush, rabbitbrush, and bunchgrasses occupy the intermediate elevations. Springs and wet meadows are scattered throughout the area, and riparian areas occur as linear ribbons, frequently extending through two or more major upland types. Vegetation associated with these areas includes willow, cottonwood, dogwood, alder, sedges, rushes, and water-loving grasses.

Big game animals include elk, mule deer, white-tailed deer, and pronghorn antelope. Populations of elk estimated at about 3,300 can be found in or migrating through major portions of the survey area. Typically, the forested areas in the north and north-central parts of the survey area provide summer range for elk. These areas are dominantly in general soil map unit 4. Critical winter range for elk is on west-facing slopes along the Snake, Little Salmon, and Rapid Rivers, mainly in general soil map units 1, 2, 4, 5, 7, and 8.

White-tailed deer occupy areas associated with riparian zones in the regions of the upper part of the Weiser River and the Little Salmon River, mainly in general soil map units 12 and 14. Mule deer are throughout the survey area. They typically occupy areas similar to those occupied by elk, although mule deer may be found in any of the general soil map units in summer. Winter range for deer overlaps with that of elk and correlates to general soil map units 1, 2, 4, 5, 7, and 8.

A small bank of pronghorn antelope use the southeastern portion of the survey area as summer range. It is mainly in general soil map units 4, 5, 9, and 10.

Upland birds that use the agricultural areas include pheasant, quail, and gray partridge. Both the agricultural areas and the adjacent riparian areas are critical for sustaining these bird populations. General soil map units 11, 13, 14, 16, and 17 are associated with the agricultural areas.

Pheasant populations in the survey area are struggling because of limited nesting and wintering cover. At the high elevations, food for pheasant is limited in winter because of the heavy snowfall.

Ruffed grouse, blue grouse, spruce grouse, and turkey are in the timbered areas. General soil map units 2, 3, 4, 5, and 8 are associated with these species. Ruffed grouse can be found throughout these units. Spruce grouse typically are in the northern part of the survey area. Blue grouse move to higher

elevations in winter, but they usually nest on more open, grassy or brush-covered slopes and ridges at the lower elevations. Turkeys generally are associated with open ponderosa pine habitat along major drainageways. Riparian areas provide critical wintering habitat for turkeys, and their survival is closely tied to high-quality riparian areas.

Chukars, sharp-tailed grouse, and sage grouse are associated with range and prairie habitat. Typically, these species are associated with general soil map units 5, 6, 7, 8, 9, and 10. Chukars occupy open areas on west-facing slopes along major drainageways. Sharp-tailed grouse is a species of special concern in Idaho. The populations of Columbian sharp-tailed grouse in Idaho are some of the last in the Pacific Northwest. This species is dependent on riparian areas, and it uses buds of shrubs and trees as a source of food in winter. Because these grouse are dependent on good-quality riparian habitat, the Nature Conservancy has purchased approximately 3,000 acres of land in the Mann Creek Reservoir area to maintain as habitat for them. Sage grouse populations currently are low, and hunting of this species is prohibited. A reduction of forbs because of the invasion of medusahead wildrye in the areas of rangeland seems to have limited sage grouse populations.

Furbearers, such as otter, beaver, mink, raccoon, and muskrat, live in and around creeks and streams in the survey area, mainly in general soil map units 12, 13, 14, 15, 16, and 17. Small creeks throughout the survey area that extend up into the foothills and mountains also provide riparian habitat for these furbearers. Coyote, red fox, and skunk are throughout the area, presumably in all of the general soil map units.

Waterfowl are concentrated along streams, rivers, and reservoirs in the survey area and in a few areas of open water wetland. Most of the wetland consists of wet meadows associated with riparian areas. Small farm ponds can provide a limited amount of habitat for waterfowl if livestock are excluded. Typical waterfowl in the survey area are geese, mallard, and teal. Most of the habitat for waterfowl is associated with general soil map units 5, 6, 7, 8, 12, 13, 14, 15, 16, and 17.

Raptors occur throughout the area. Osprey and bald eagle use the Snake River and Weiser River areas. Osprey nest along these rivers, and bald eagle winter along these rivers. General soil map units 5, 6, 7, 8, 15, and 16 are associated with this habitat. Red-tailed hawk, Swainson's hawk, ferruginous hawk, sharp-shinned hawk, prairie falcon, kestrels, great horned owl, short-eared owl, and burrowing owl occur throughout the survey area in all of the general soil map units.

Historically, salmon and steelhead used the rivers and creeks in the survey area for spawning and as areas for rearing their young. Because of developments on the Snake River, however, the traditional migration of salmon and steelhead has stopped. Resident salmonoids still use the rivers and creeks in the area. Resident populations of rainbow trout, brook trout, and brown trout live in the perennial streams and creeks throughout the area. Brownlee Reservoir supports a cool-water fishery for trout, small-mouthed bass, and crappie. The reservoir is a major recreational area for Idaho and Oregon.

Wildlife populations are largely determined by the suitability of the habitat, which includes the supply of food, the amount of cover, and the availability of water. Habitat differs in its capacity to provide these essential needs. Soils affect the kind and amount of vegetation that is available to wildlife as food and cover. They also affect the construction of water impoundments. Wildlife habitat can be created or improved by planting appropriate vegetation, by maintaining the existing plant cover, or by promoting the natural establishment of desirable plants. Good management practices are needed to improve habitat for wildlife.

Engineering

This section provides information for planning land uses related to urban development and to water management. Soils are rated for various uses, and the most limiting features are identified. Ratings are given for building site development, sanitary facilities, construction materials, and water management. The ratings are based on observed performance of the soils and on the estimated data and test data in the "Soil Properties" section.

Information in this section is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil within a depth of 5 or 6 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this section. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Soil properties, site features, and observed performance were considered in determining the ratings in this section. During the fieldwork for this soil survey, determinations were made about grain-size distribution, liquid limit, plasticity index, soil reaction, depth to bedrock, hardness of bedrock within 5 or 6 feet of the surface, soil wetness, depth to a seasonal high water table, slope, likelihood of flooding, natural soil structure aggregation, and soil density. Data were collected about kinds of clay minerals, mineralogy of the sand and silt fractions, and the kinds of adsorbed cations. Estimates were made for erodibility, permeability, corrosivity, shrink-swell potential, available water capacity, and other behavioral characteristics affecting engineering uses.

This information can be used to evaluate the potential of areas for residential, commercial, industrial, and recreational uses; make preliminary estimates of construction conditions; evaluate alternative routes for roads, streets, highways, pipelines, and underground cables; evaluate alternative sites for sanitary landfills, septic tank absorption fields, and sewage lagoons; plan detailed onsite investigations of soils and geology; locate potential sources of gravel, sand, earthfill, and topsoil; plan drainage systems, irrigation systems, ponds, terraces, and other structures for soil and water conservation; and predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

The information in the tables, along with the soil maps, the soil descriptions, and other data provided in this survey, can be used to make additional interpretations.

Some of the terms used in this soil survey have a special meaning in soil science and are defined in the Glossary.

Building Site Development

Table 9 shows the degree and kind of soil limitations that affect shallow excavations, dwellings with and without basements, small commercial buildings, local roads and streets, and lawns and landscaping. The limitations are considered *slight* if soil properties and site features are generally favorable for the indicated use and limitations are minor and easily overcome; *moderate* if soil properties or site features are not favorable for the indicated use and special planning, design, or maintenance is needed to overcome or minimize the limitations; and *severe* if soil properties or site features are so unfavorable or so difficult to overcome that special design, significant increases in construction costs, and possibly increased maintenance are required. Special feasibility studies may be required where the soil limitations are severe.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for basements, graves, utility lines, open ditches, and other purposes. The ratings are based on soil properties, site features, and observed performance of the soils. The ease of digging, filling, and compacting is affected by the depth to bedrock, a cemented pan, or a very firm dense layer; stone content; soil texture; and slope. The time of the year that excavations can be made is affected by the depth to a seasonal high water table and the susceptibility of the soil to flooding. The resistance of the excavation walls or banks to sloughing or caving is affected by soil texture and depth to the water table.

Dwellings and *small commercial buildings* are structures built on shallow foundations on undisturbed soil. The load limit is the same as that for single-family dwellings no higher than three stories. Ratings are made for small commercial buildings without basements, for dwellings with basements, and for dwellings without basements. The ratings are based on soil properties, site features, and observed performance of the soils. A high water table, flooding, shrinking and swelling, and organic layers can cause the movement of footings. A high water table, depth to bedrock or to a cemented pan, large stones, slope, and flooding affect the ease of excavation and construction. Landscaping and grading that require cuts and fills of more than 5 or 6 feet are not considered.

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or stabilized soil material; and a flexible or rigid surface. Cuts and fills are generally limited to less than 6 feet. The ratings are based on soil properties, site features, and observed performance of the soils. Depth to bedrock or to a cemented pan, a high water table, flooding, large stones, and slope affect the ease of excavating and grading. Soil strength (as inferred from the engineering classification of the soil), shrink-swell potential, frost action potential, and depth to a high water table affect the traffic-supporting capacity.

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. The ratings are based on soil properties, site features, and observed performance of the soils. Soil reaction, a high water table, depth to bedrock or to a cemented pan, the available water capacity in the upper 40 inches, and the content of salts, sodium, and sulfidic materials affect plant growth. Flooding, wetness, slope, stoniness, and the

amount of sand, clay, or organic matter in the surface layer affect trafficability after vegetation is established.

Sanitary Facilities

Table 10 shows the degree and kind of soil limitations that affect septic tank absorption fields, sewage lagoons, and sanitary landfills. The limitations are considered *slight* if soil properties and site features are generally favorable for the indicated use and limitations are minor and easily overcome; *moderate* if soil properties or site features are not favorable for the indicated use and special planning, design, or maintenance is needed to overcome or minimize the limitations; and *severe* if soil properties or site features are so unfavorable or so difficult to overcome that special design, significant increases in construction costs, and possibly increased maintenance are required.

The table also shows the suitability of the soils for use as daily cover for landfill. A rating of *good* indicates that soil properties and site features are favorable for the use and good performance and low maintenance can be expected; *fair* indicates that soil properties and site features are moderately favorable for the use and one or more soil properties or site features make the soil less desirable than the soils rated good; and *poor* indicates that one or more soil properties or site features are unfavorable for the use and overcoming the unfavorable properties requires special design, extra maintenance, or costly alteration.

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 72 inches is evaluated. The ratings are based on soil properties, site features, and observed performance of the soils. Permeability, a high water table, depth to bedrock or to a cemented pan, and flooding affect absorption of the effluent. Large stones and bedrock or a cemented pan interfere with installation.

Unsatisfactory performance of septic tank absorption fields, including excessively slow absorption of effluent, surfacing of effluent, and hillside seepage, can affect public health. Ground water can be polluted if highly permeable sand and gravel or fractured bedrock is less than 4 feet below the base of the absorption field, if slope is excessive, or if the water table is near the surface. There must be unsaturated soil material beneath the absorption field to filter the effluent effectively. Many local ordinances require that this material be of a certain thickness.

Sewage lagoons are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Lagoons generally are designed to hold the sewage within a depth of 2 to 5 feet. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water.

The table gives ratings for the natural soil that makes up the lagoon floor. The surface layer and, generally, 1 or 2 feet of soil material below the surface layer are excavated to provide material for the embankments. The ratings are based on soil properties, site features, and observed performance of the soils. Considered in the ratings are slope, permeability, a high water table, depth to bedrock or to a cemented pan, flooding, large stones, and content of organic matter.

Excessive seepage resulting from rapid permeability in the soil or a water table that is high enough to raise the level of sewage in the lagoon causes a lagoon to function unsatisfactorily. Pollution results if seepage is excessive or if floodwater overtops the lagoon. A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor.

Sanitary landfills are areas where solid waste is disposed of by burying it in soil. There are two types of landfill—trench and area. In a trench landfill, the waste is placed in a trench. It is spread, compacted, and covered daily with a thin layer of soil excavated at the site. In an area landfill, the waste is placed in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil from a source away from the site.

Both types of landfill must be able to bear heavy vehicular traffic. Both types involve a risk of ground-water pollution. Ease of excavation and revegetation should be considered.

The ratings in the table are based on soil properties, site features, and observed performance of the soils. Permeability, depth to bedrock or to a cemented pan, a high water table, slope, and flooding affect both types of landfill. Texture, stones and boulders, highly organic layers, soil reaction, and content of salts and sodium affect trench landfills. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, a limitation rated slight or moderate may not be valid. Onsite investigation is needed.

Daily cover for landfill is the soil material that is used to cover compacted solid waste in an area

sanitary landfill. The soil material is obtained offsite, transported to the landfill, and spread over the waste.

Soil texture, wetness, coarse fragments, and slope affect the ease of removing and spreading the material during wet and dry periods. Loamy or silty soils that are free of large stones or excess gravel are the best cover for a landfill. Clayey soils are sticky or cloddy and are difficult to spread; sandy soils are subject to wind erosion.

After soil material has been removed, the soil material remaining in the borrow area must be thick enough over bedrock, a cemented pan, or the water table to permit revegetation. The soil material used as the final cover for a landfill should be suitable for plants. The surface layer generally has the best workability, more organic matter, and the best potential for plants. Material from the surface layer should be stockpiled for use as the final cover.

Construction Materials

Table 11 gives information about the soils as a source of roadfill, sand, gravel, and topsoil. The soils are rated *good, fair,* or *poor* as a source of roadfill and topsoil. They are rated as a *probable* or *improbable* source of sand and gravel. The ratings are based on soil properties and site features that affect the removal of the soil and its use as construction material. Normal compaction, minor processing, and other standard construction practices are assumed. Each soil is evaluated to a depth of 5 or 6 feet.

Roadfill is soil material that is excavated in one place and used in road embankments in another place. In this table, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the soil material below the surface layer to a depth of 5 or 6 feet. It is assumed that soil layers will be mixed during excavating and spreading. Many soils have layers of contrasting suitability within their profile. The table showing engineering index properties provides detailed information about each soil layer. This information can help to determine the suitability of each layer for use as roadfill. The performance of soil after it is stabilized with lime or cement is not considered in the ratings.

The ratings are based on soil properties, site features, and observed performance of the soils. The thickness of suitable material is a major consideration. The ease of excavation is affected by large stones, a high water table, and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the engineering classification of the soil) and shrink-swell potential.

Soils rated *good* contain significant amounts of sand or gravel, or both. They have at least 5 feet of suitable material, a low shrink-swell potential, few cobbles and stones, and slopes of 15 percent or less. Depth to the water table is more than 3 feet. Soils rated *fair* are more than 35 percent silt- and clay-sized particles and have a plasticity index of less than 10. They have a moderate shrink-swell potential, slopes of 15 to 25 percent, or many stones. Depth to the water table is 1 to 3 feet. Soils rated *poor* have a plasticity index of more than 10, a high shrink-swell potential, many stones, or slopes of more than 25 percent. They are wet and have a water table at a depth of less than 1 foot. They may have layers of suitable material, but the material is less than 3 feet thick.

Sand and *gravel* are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In the table, only the probability of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material.

The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the engineering classification of the soil), the thickness of suitable material, and the content of rock fragments. Kinds of rock, acidity, and stratification are given in the taxonomic unit descriptions. Gradation of grain sizes is given in the table on engineering index properties.

A soil rated as a probable source has a layer of clean sand or gravel or a layer of sand or gravel that is up to 12 percent silty fines. This material must be at least 3 feet thick and less than 50 percent, by weight, large stones. All other soils are rated as an improbable source. Coarse fragments of soft bedrock, such as shale and siltstone, are not considered to be sand and gravel.

Topsoil is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area.

Plant growth is affected by toxic material and by such properties as soil reaction, available water capacity, and fertility. The ease of excavating, loading, and spreading is affected by rock fragments, slope, a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, a water table, rock fragments, bedrock, and toxic material.

Soils rated *good* have friable, loamy material to a depth of at least 40 inches. They are free of stones and

cobbles, have little or no gravel, and have slopes of less than 8 percent. They are low in content of soluble salts, are naturally fertile or respond well to fertilizer, and are not so wet that excavation is difficult.

Soils rated *fair* are sandy soils, loamy soils that have a relatively high content of clay, soils that have only 20 to 40 inches of suitable material, soils that have an appreciable amount of gravel, stones, or soluble salts, or soils that have slopes of 8 to 15 percent. The soils are not so wet that excavation is difficult.

Soils rated *poor* are very sandy or clayey, have less than 20 inches of suitable material, have a large amount of gravel, stones, or soluble salts, have slopes of more than 15 percent, or have a seasonal high water table at or near the surface.

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

Water Management

Table 12 gives information on the soil properties and site features that affect water management. The degree and kind of soil limitations are given for pond reservoir areas and embankments, dikes, and levees. The limitations are considered *slight* if soil properties and site features are generally favorable for the indicated use and limitations are minor and are easily overcome; *moderate* if soil properties or site features are not favorable for the indicated use and special planning, design, or maintenance is needed to overcome or minimize the limitations; and *severe* if soil properties or site features are so unfavorable or so difficult to overcome that special design, significant increase in construction costs, and possibly increased maintenance are required.

This table also gives for each soil the restrictive features that affect drainage, irrigation, terraces and diversions, and grassed waterways.

Pond reservoir areas hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is determined by the permeability of the soil and the depth to fractured bedrock or other permeable material. Excessive slope can affect the storage capacity of the reservoir area.

Embankments, dikes, and levees are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of about 5 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

The ratings do not indicate the ability of the natural soil to support an embankment. Soil properties to a depth even greater than the height of the embankment can affect performance and safety of the embankment. Generally, deeper onsite investigation is needed to determine these properties.

Soil material in embankments must be resistant to seepage, piping, and erosion and have favorable compaction characteristics. Unfavorable features include less than 5 feet of suitable material and a high content of stones or boulders, organic matter, or salts or sodium. A high water table affects the amount of usable material. It also affects trafficability.

Drainage is the removal of excess surface and subsurface water from the soil. How easily and effectively the soil is drained depends on the depth to bedrock, to a cemented pan, or to other layers that affect the rate of water movement; permeability; depth to a high water table or depth of standing water if the soil is subject to ponding; slope; susceptibility to flooding; subsidence of organic layers; and the potential for frost action. Excavating and grading and the stability of ditchbanks are affected by depth to bedrock or to a cemented pan, large stones, slope, and the hazard of cutbanks caving in. The productivity of the soil after drainage is adversely affected by extreme acidity or by toxic substances in the root zone, such as salts, sodium, and sulfur. Availability of drainage outlets is not considered in the ratings.

Irrigation is the controlled application of water to supplement rainfall and support plant growth. The design and management of an irrigation system are affected by depth to the water table, the need for drainage, flooding, available water capacity, intake rate, permeability, erosion hazard, and slope. The construction of a system is affected by large stones and depth to bedrock or to a cemented pan. The performance of a system is affected by the depth of the root zone, the amount of salts or sodium, and soil reaction.

Terraces and diversions are embankments or a combination of channels and ridges constructed across a slope to control erosion and conserve moisture by intercepting runoff. Slope, wetness, large stones, and depth to bedrock or to a cemented pan affect the construction of terraces and diversions. A restricted rooting depth, a severe hazard of wind erosion or water erosion, an excessively coarse texture, and restricted permeability adversely affect maintenance.

Grassed waterways are natural or constructed

channels, generally broad and shallow, that conduct surface water to outlets at a nonerosive velocity. Large stones, wetness, slope, and depth to bedrock or to a cemented pan affect the construction of grassed waterways. A hazard of wind erosion, low available water capacity, restricted rooting depth, toxic substances such as salts and sodium, and restricted permeability adversely affect the growth and maintenance of the grass after construction.

Soil Properties

Data relating to soil properties are collected during the course of the soil survey. The data and the estimates of soil and water features, listed in tables, are explained on the following pages.

Soil properties are determined by field examination of the soils and by laboratory index testing of some benchmark soils. Established standard procedures are followed. During the survey, many shallow borings are made and examined to identify and classify the soils and to delineate them on the soil maps. Samples are taken from some typical profiles and tested in the laboratory to determine grain-size distribution, plasticity, and compaction characteristics.

Estimates of soil properties are based on field examinations, on laboratory tests of samples from the survey area, and on laboratory tests of samples of similar soils in nearby areas. Tests verify field observations, verify properties that cannot be estimated accurately by field observation, and help to characterize key soils.

The estimates of soil properties shown in the tables include the range of grain-size distribution and Atterberg limits, the engineering classification, and the physical and chemical properties of the major layers of each soil. Pertinent soil and water features also are given.

Engineering Index Properties

Table 13 gives estimates of the engineering classification and of the range of index properties for the major layers of each soil in the survey area. Most soils have layers of contrasting properties within the upper 5 or 6 feet.

Depth to the upper and lower boundaries of each layer is indicated. The range in depth and information on other properties of each layer are given for each taxonomic unit under the heading "Taxonomic Units and Their Morphology."

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. "Loam," for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is as much as about 15 percent, an appropriate modifier is added, for example, "gravelly." Textural terms are defined in the Glossary.

Classification of the soils is determined according to the Unified soil classification system *(2, 5)* and the system adopted by the American Association of State Highway and Transportation Officials *(1, 5)*.

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to grain-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of grain-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

Rock fragments larger than 10 inches and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage.

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an ovendry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area

and in nearby areas and on estimates made in the field.

Liquid limit and *plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination.

The estimates of grain-size distribution, liquid limit, and plasticity index are generally rounded to the nearest 5 percent. Thus, if the ranges of gradation and Atterberg limits extend a marginal amount (1 or 2 percentage points) across classification boundaries, the classification in the marginal zone is omitted in the table.

Physical and Chemical Properties

Table 14 shows estimates of some characteristics and features that affect soil behavior. These estimates are given for the major layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated. The range in depth and information on other properties of each layer are given for each taxonomic unit under "Taxonomic Units and Their Morphology."

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In this table, the estimated clay content of each major soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The amount and kind of clay greatly affect the fertility and physical condition of the soil. They determine the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (ovendry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at 1/3-bar moisture tension. Weight is determined after drying the soil at 105 degrees C. In this table, the estimated moist bulk density of each major soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. A bulk density of more than 1.6 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Permeability refers to the ability of a soil to transmit water or air. The estimates indicate the rate of downward movement of water when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each major soil layer. The capacity varies, depending on soil properties that affect the retention of water and the depth of the root zone. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Soil reaction is a measure of acidity or alkalinity and is expressed as a range in pH values. The range in pH of each major horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

Salinity is a measure of soluble salts in the soil at saturation. It is expressed as the electrical conductivity of the saturation extract, in millimhos per centimeter at 25 degrees C. Estimates are based on field and laboratory measurements at representative sites of nonirrigated soils. The salinity of irrigated soils is affected by the quality of the irrigation water and by the frequency of water application. Hence, the salinity of soils in individual fields can differ greatly from the value given in the table. Salinity affects the suitability of a soil for crop production, the stability of soil if used as construction material, and the potential of the soil to corrode metal and concrete.

Shrink-swell potential is the potential for volume change in a soil with a loss or gain in moisture. Volume change occurs mainly because of the interaction of clay minerals with water and varies with the amount and type of clay minerals in the soil. The size of the load on the soil and the magnitude of the change in soil moisture content influence the amount of swelling of soils in place. Laboratory measurements of swelling of undisturbed clods were made for many soils. For

others, swelling was estimated on the basis of the kind and amount of clay minerals in the soil and on measurements of similar soils.

If the shrink-swell potential is rated moderate to very high, shrinking and swelling can cause damage to buildings, roads, and other structures. Special design is often needed.

Shrink-swell potential classes are based on the change in length of an unconfined clod as moisture content is increased from air-dry to field capacity. The classes are *low*, a change of less than 3 percent; *moderate*, 3 to 6 percent; *high*, more than 6 percent; and *very high*, greater than 9 percent.

Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter (up to 4 percent) and on soil structure and permeability. Values of K range from 0.02 to 0.64. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their resistance to wind erosion in cultivated areas. The groups indicate the susceptibility of soil to wind erosion. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are as follows:

1. Coarse sands, sands, fine sands, and very fine sands.
2. Loamy coarse sands, loamy sands, loamy fine sands, loamy very fine sands, ash material, and sapric soil material.
3. Coarse sandy loams, sandy loams, fine sandy loams, and very fine sandy loams.

4L. Calcareous loams, silt loams, clay loams, and silty clay loams.

4. Clays, silty clays, noncalcareous clay loams, and silty clay loams that are more than 35 percent clay.
5. Noncalcareous loams and silt loams that are less than 20 percent clay and sandy clay loams, sandy clays, and hemic soil material.
6. Noncalcareous loams and silt loams that are more than 20 percent clay and noncalcareous clay loams that are less than 35 percent clay.
7. Silts, noncalcareous silty clay loams that are less than 35 percent clay, and fibric soil material.
8. Soils that are not subject to wind erosion because of coarse fragments on the surface or because of surface wetness.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In the table, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained or increased by returning crop residue to the soil. Organic matter affects the available water capacity, infiltration rate, and tilth. It is a source of nitrogen and other nutrients for crops.

Soil and Water Features

Tables 15 gives estimates of various water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

Flooding, the temporary inundation of an area, is caused by overflowing streams, by runoff from

adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

The table gives the frequency and duration of flooding and the time of year when flooding is most likely. Frequency, duration, and probable dates of occurrence are estimated. Frequency is expressed as none, rare, occasional, and frequent. *None* means that flooding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of flooding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of flooding is more than 50 percent in any year). *Common* is used when the occasional and frequent classes are grouped for certain purposes. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 days to 1 month, and *very long* if more than 1 month. Probable dates are expressed in months. About two-thirds to three-fourths of all flooding occurs during the stated period.

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

High water table (seasonal) is the highest level of a saturated zone in the soil in most years. The estimates are based mainly on observations of the water table at selected sites and on the evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. Indicated in the table are the depth to the seasonal high water table; the kind of water table—that is, perched, apparent, or artesian; and the months of the year that the water table commonly is high. A water table that is seasonally high for less than 1 month is not indicated in the table.

An *apparent* water table is a thick zone of free water in the soil. It is indicated by the level at which water stands in an uncased borehole after adequate time is allowed for adjustment in the surrounding soil. A *perched* water table is water standing above an unsaturated zone. In places an upper, or perched, water table is separated from a lower one by a dry zone. An *artesian* water table is under hydrostatic head, generally below an impermeable layer. When this layer is penetrated, the water level rises in an uncased borehole.

Two numbers in the column showing depth to the water table indicate the normal range in depth to a saturated zone. Depth is given to the nearest half foot. The first numeral in the range indicates the highest water level. A plus sign preceding the range in depth indicates that the water table is above the surface of the soil. "More than 6.0" indicates that the water table is below a depth of 6 feet or that it is within a depth of 6 feet for less than a month.

Table 16 gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

Depth to bedrock is given if bedrock is within a depth of 5 feet. The depth is based on many soil borings and on observations during soil mapping. The rock is either soft or hard. If the rock is soft or fractured, excavations can be made with trenching machines, backhoes, or small rippers. If the rock is hard or massive, blasting or special equipment generally is needed for excavation.

A *cemented pan* is a cemented or indurated subsurface layer within a depth of 5 feet. Such a pan causes difficulty in excavation. Pans are classified as thin or thick. A thin pan is less than 3 inches thick if continuously indurated or less than 18 inches thick if discontinuous or fractured. Excavations can be made by trenching machines, backhoes, or small rippers. A thick pan is more than 3 inches thick if continuously indurated or more than 18 inches thick if discontinuous or fractured. Such a pan is so thick or massive that blasting or special equipment is needed in excavation.

Potential frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, permeability, content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage mainly to pavements and other rigid structures.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that dissolves or

weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than steel in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low, moderate*, or *high*, is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion is also expressed as *low, moderate*, or *high*. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories *(8)*. Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. Table 17 shows the classification of the soils in the survey area. The categories are defined in the following paragraphs.

ORDER. Eleven soil orders are recognized. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol*. An example is Mollisol.

SUBORDER. Each order is divided into suborders primarily on the basis of properties that influence soil genesis and are important to plant growth or properties that reflect the most important variables within the orders. The last syllable in the name of a suborder indicates the order. An example is Aquoll (*Aqu*, meaning water, plus *oll*, from Mollisol).

GREAT GROUP. Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; type of saturation; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Cryaquolls (*Cry*, meaning very cold, plus *aquoll*, the suborder of the Mollisols that has an aquic moisture regime).

SUBGROUP. Each great group has a typic subgroup. Other subgroups are intergrades or extragrades. The typic subgroup is the central concept of the great group; it is not necessarily the most extensive. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but do not indicate transitions to any other taxonomic class. Each subgroup is identified by one or more adjectives preceding the name of the great group. The adjective *Typic* identifies the subgroup that typifies the great group. An example is Typic Cryaquolls.

FAMILY. Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties are those of horizons below plow depth where there is much biological activity. Among the properties and characteristics considered are particle size, mineral content, soil temperature regime, soil depth, and reaction. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is fine-loamy, mixed Typic Cryaquolls.

SERIES. The series consists of soils within a family that have horizons similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile. The texture of the surface layer or substratum can differ within a series. An example is the Blackwell series.

Taxonomic Units and Their Morphology

In this section, each taxonomic unit recognized in the survey area is described. The descriptions are arranged in alphabetic order. Characteristics of the soil and the material in which it formed are identified for each unit. A pedon, a small three-dimensional area of soil, that is typical of the unit in the survey area is described. The detailed description of each soil horizon follows standards in the Soil Survey Manual *(11)*. Many of the technical terms used in the descriptions are defined in Keys to Soil Taxonomy *(8)*. Unless otherwise stated, colors in the descriptions are for dry soil. Following the pedon descriptions is the range of important characteristics of the soils in the unit.

The map units of each taxonomic unit are described in the section "Detailed Soil Map Units."

Abo Series

Taxonomic class: Fine-loamy, mixed, mesic Aquic Haplargids

Setting

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderately slow
Landform: Stream terraces
Parent material: Kind—alluvium; source—mixed
Slope range: 0 to 2 percent
Elevation: 2,100 to 2,200 feet
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—48 to 50 degrees F
Frost-free period—150 to 155 days

Typical Pedon Description

A—0 to 4 inches; light brownish gray (10YR 6/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak thin and medium platy structure; hard, firm, slightly sticky and slightly plastic; many fine roots; common fine pores; moderately alkaline (pH 8.0); abrupt smooth boundary.

Bt—4 to 11 inches; light brownish gray (10YR 6/2) silty clay loam, dark grayish brown (10YR 4/2) moist; moderate medium prismatic structure parting to moderate medium subangular blocky; hard, firm, sticky and plastic; common fine roots; common very fine pores; many thin very dark grayish brown (10YR 3/2) distinct clay films; moderately alkaline (pH 8.0); abrupt smooth boundary.

Bk1—11 to 20 inches; very pale brown (10YR 7/3) silt loam, brown (10YR 5/3) moist; weak medium subangular blocky structure; hard, firm, slightly sticky and slightly plastic; common fine roots; few very fine pores; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

Bk2—20 to 34 inches; very pale brown (10YR 7/3) silt loam, yellowish brown (10YR 5/4) moist; massive; hard, firm, slightly sticky and slightly plastic; few fine roots; few very fine pores; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

Bk3—34 to 60 inches; very pale brown (10YR 7/3) silt loam, yellowish brown (10YR 5/4) moist; massive; hard, firm, nonsticky and nonplastic; common very fine pores; many fine faint dark brown (10YR 4/3) mottles; strongly effervescent; moderately alkaline (pH 8.0).

Typical Pedon Location

Map unit in which located: Abo silt loam, 0 to 2 percent slopes
Location in survey area: About 2 miles south of Weiser; 2,600 feet east and 2,530 feet south of the northwest corner of sec. 17, T. 10 N., R. 5 W.

Range in Characteristics

Profile:
Depth to calcium carbonates—11 to 24 inches
Depth to water table—36 to 60 inches

A horizon:
Value—5 or 6 dry, 3 or 4 moist
Chroma—2 or 3 dry or moist

Bt horizon:
Value—6 or 7 dry, 3 or 4 moist
Chroma—2 or 3 dry or moist

Bk horizon:
Chroma—3 or 4 dry or moist
Calcium carbonate equivalent—15 to 25 percent

Agerdelly Series

Taxonomic class: Very-fine, montmorillonitic, mesic Entic Chromoxererts

Setting

Depth class: Very deep
Drainage class: Well drained
Permeability: Very slow
Landform: Foothills and lacustrine terraces
Parent material: Kind—residuum; source—volcanic tuff and siltstone
Slope range: 2 to 60 percent
Elevation: 2,100 to 4,500 feet
Climatic data (average annual):
Precipitation—12 to 14 inches
Air temperature—46 to 52 degrees F
Frost-free period—130 to 145 days

Typical Pedon Description

A1—0 to 4 inches; light brownish gray (2.5Y 6/2) clay, dark grayish brown (2.5Y 4/2) moist; strong fine and medium granular structure; very hard, friable, very sticky and very plastic; few very fine roots; many very fine irregular pores; cracks 3 centimeters wide; neutral (pH 7.2); abrupt smooth boundary.

A2—4 to 9 inches; light brownish gray (2.5Y 6/2) clay, dark grayish brown (2.5Y 4/2) moist; moderate

medium prismatic structure; very hard, firm, very sticky and very plastic; few very fine roots; few very fine tubular pores; cracks 2 centimeters wide; neutral (pH 7.2); clear smooth boundary.

A3—9 to 22 inches; light brownish gray (2.5Y 6/2) clay, dark grayish brown (2.5Y 4/2) moist; strong fine and medium subangular blocky structure; very hard, very firm, very sticky and very plastic; few very fine roots; few very fine tubular pores; cracks 2 centimeters wide; many vertical slickensides; mildly alkaline (pH 7.4); gradual smooth boundary.

A4—22 to 38 inches; light brownish gray (2.5Y 6/2) clay, dark grayish brown (2.5Y 4/2) moist; strong coarse prismatic structure; very hard, very firm, very sticky and very plastic; few very fine tubular pores; cracks 1 centimeter wide; common slickensides; moderately alkaline (pH 8.2); gradual smooth boundary.

Bk—38 to 60 inches; light brownish gray (2.5Y 6/2) clay, dark grayish brown (2.5Y 4/2) moist; common medium spots of pale yellow (10YR 7/4); weak coarse prismatic structure parting to strong fine and medium subangular blocky; very hard, very firm, very sticky and very plastic; few very fine tubular pores; slightly effervescent; moderately alkaline (pH 8.2).

Typical Pedon Location

Map unit in which located: Agerdelly clay, 30 to 60 percent slopes (fig. 11)

Location in survey area: About 7 miles northwest of Weiser; 2,300 feet west and 800 feet north of the southeast corner of sec. 18, T. 11 N., R. 6 W.

Range in Characteristics

Profile:

Depth to calcium carbonates—30 to 44 inches

Cracks—at least 1 centimeter wide, at the surface to a depth of 20 inches or more, and present from mid-May through October

A horizon:

Hue—2.5Y or 10YR

Value—5 or 6 dry, 3 or 4 moist

Chroma—2 or 3 dry or moist

Appledellia Series

Taxonomic class: Fine, montmorillonitic, mesic Typic Durixerolls

Setting

Depth class: Moderately deep to a duripan

Drainage class: Well drained

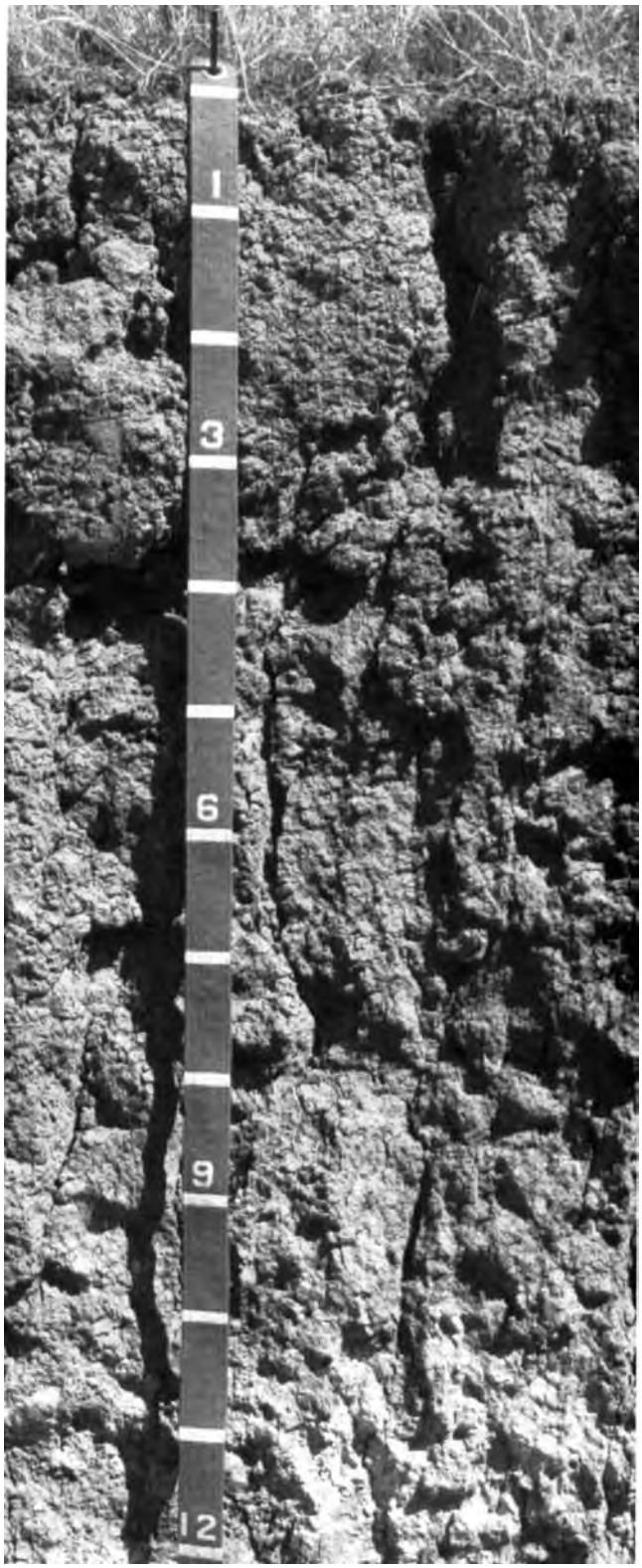

Figure 11.—Profile of Agerdelly clay, 30 to 60 percent slopes (numerals on tape indicate decimeters). Depth to calcium carbonates is about 39 inches (10 decimeters).

Permeability: Slow
Landform: Fan terraces
Parent material: Kind—alluvium; source—basalt and granite
Slope range: 2 to 30 percent
Elevation: 2,500 to 3,500 feet
Climatic data (average annual):
Precipitation—16 to 25 inches
Air temperature—48 to 52 degrees F
Frost-free period—110 to 130 days

Typical Pedon Description

A—0 to 10 inches; brown (7.5YR 5/2) loam, dark brown (7.5YR 3/2) moist; weak very fine and fine granular structure; soft, friable, slightly sticky and slightly plastic; common very fine roots; many very fine irregular pores; 2 percent pebbles; neutral (pH 7.0); gradual smooth boundary.

Bt1—10 to 18 inches; reddish brown (5YR 5/3) clay, dark reddish brown (5YR 3/2) moist; moderate coarse subangular blocky structure; hard, very firm, very sticky and very plastic; few very fine roots; common very fine tubular pores; 2 percent pebbles; many distinct clay films on faces of peds; neutral (pH 7.2); gradual smooth boundary.

Bt2—18 to 32 inches; reddish brown (5YR 5/4) gravelly clay, dark reddish brown (5YR 3/4) moist; moderate medium prismatic structure; very hard, very firm, very sticky and very plastic; few very fine roots; common very fine tubular pores; 15 percent pebbles; many distinct clay films on faces of peds; neutral (pH 7.3); abrupt wavy boundary.

2Bqm—32 to 33 inches; indurated duripan with discontinuous laminar surface; abrupt wavy boundary.

2C—33 to 60 inches; multicolored extremely gravelly sand; massive; slightly hard, very friable, nonsticky and nonplastic; 65 percent pebbles; mildly alkaline (pH 7.6).

Typical Pedon Location

Map unit in which located: Appledellia-Appleshall complex, 2 to 15 percent slopes (fig. 12)
Location in survey area: About 6 miles northeast of Crane Creek Reservoir; 2,200 feet west and 2,450 feet north of the southeast corner of sec. 34, T. 13 N., R. 1 W.

Range in Characteristics

Profile:
Thickness of mollic epipedon—10 to 20 inches
Depth to duripan—20 to 40 inches

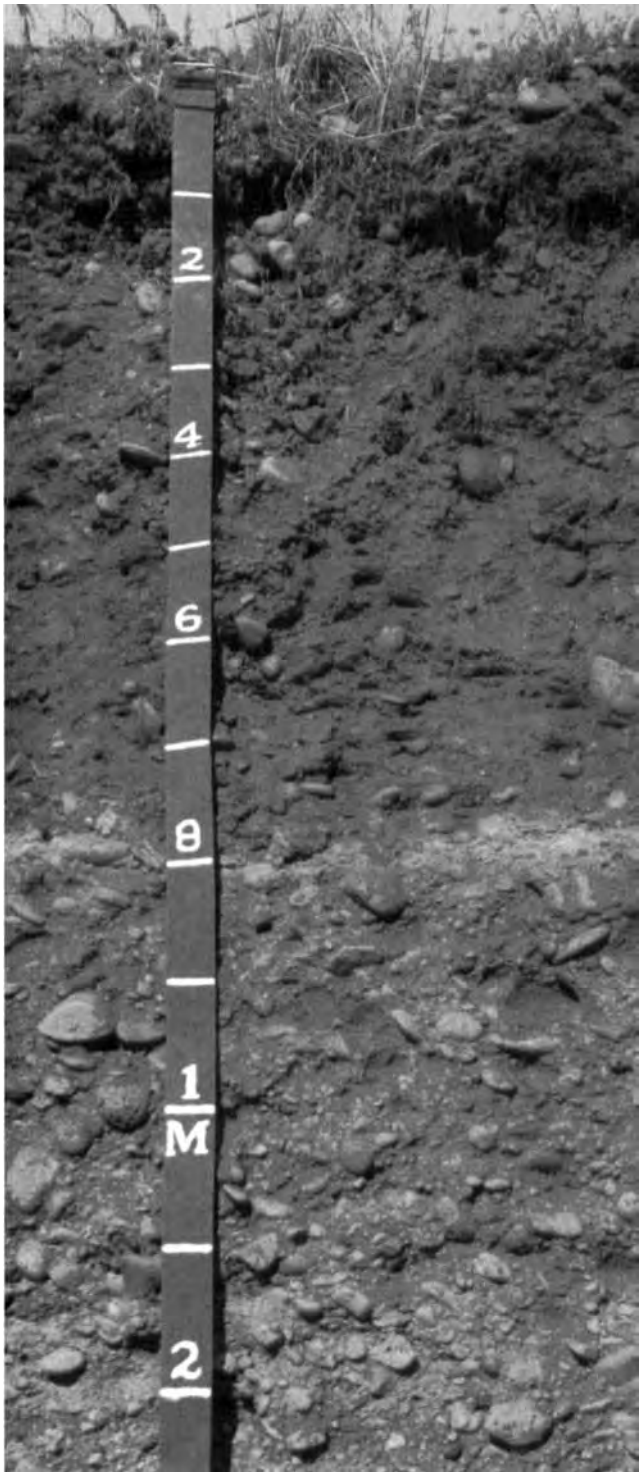

Figure 12.—Profile of Appledellia loam in an area of Appledellia-Appleshall complex, 2 to 15 percent slopes (numerals on tape indicate decimeters). A hardpan is at a depth of about 32 inches (8 decimeters).

A horizon:
Hue—7.5YR or 10YR
Value—4 or 5 dry
Chroma—2 or 3 dry or moist

Bt horizon:
Hue—5YR or 7.5YR
Value—4 or 5 dry, 3 or 4 moist
Chroma—2 to 4 dry or moist
Texture—clay loam, clay, or gravelly clay

Clay content—35 to 50 percent
Rock fragment content—5 to 20 percent

2Bqm horizon:
Thickness—1/8 to 1 inch

2C horizon:
Hue—5YR to 10YR
Value—4 to 6 dry
Chroma—3 or 4 dry
Rock fragment content—65 to 80 percent

Appleshall Series

Taxonomic class: Loamy-skeletal, mixed, mesic, shallow Typic Durixerolls

Setting

Depth class: Shallow to a duripan
Drainage class: Well drained
Permeability: Slow
Landform: Fan terraces
Parent material: Kind—alluvium; source—basalt and some granite
Slope range: 2 to 10 percent
Elevation: 2,600 to 3,500 feet
Climatic data (average annual):
Precipitation—16 to 25 inches
Air temperature—48 to 52 degrees F
Frost-free period—110 to 130 days

Typical Pedon Description

A—0 to 6 inches; grayish brown (10YR 5/2) gravelly clay loam, very dark grayish brown (10YR 3/2) moist; moderate fine and coarse granular structure; hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; 25 percent pebbles; neutral (pH 7.0); clear smooth boundary.
Bt—6 to 12 inches; grayish brown (10YR 5/2) very gravelly clay loam, dark brown (10YR 3/3) moist; moderate fine subangular blocky structure; hard, firm, sticky and plastic; common very fine roots; common very fine irregular pores; 45 percent pebbles; few faint clay films on faces of peds; neutral (pH 7.0); abrupt wavy boundary.
2Bqm—12 to 13 inches; indurated duripan with discontinuous laminar surface; abrupt wavy boundary.
2C—13 to 60 inches; multicolored extremely gravelly sand; massive; slightly hard, very friable, nonsticky and nonplastic; 65 percent pebbles; mildly alkaline (pH 7.6).

Typical Pedon Location

Map unit in which located: Appledellia-Appleshall complex, 2 to 15 percent slopes
Location in survey area: About 15 miles southeast of Midvale; 2,250 feet west and 2,670 feet north of the southeast corner of sec. 34, T. 13 N., R. 1 W.

Range in Characteristics

Profile:
Depth to duripan—10 to 20 inches

A horizon:
Hue—7.5YR or 10YR
Value—4 or 5 dry

Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5 dry
Chroma—2 or 3 dry or moist
Rock fragment content—35 to 45 percent

2Bqm horizon:
Thickness—1/8 to 1 inch

2C horizon:
Hue—5YR to 10YR
Value—4 to 6 dry or moist
Chroma—3 or 4 dry or moist
Rock fragment content—65 to 80 percent

Bakeoven Series

Taxonomic class: Loamy-skeletal, mixed, mesic Lithic Haploxerolls

Setting

Depth class: Very shallow
Drainage class: Well drained
Permeability: Moderately slow
Landform: Mountains and foothills
Parent material: Kind—residuum; source—basalt

Slope range: 2 to 80 percent
Elevation: 2,300 to 4,800 feet
Climatic data (average annual):
Precipitation—12 to 16 inches
Air temperature—47 to 51 degrees F
Frost-free period—110 to 140 days

Typical Pedon Description

A—0 to 3 inches; grayish brown (10YR 5/2) extremely stony loam, very dark grayish brown (10YR 3/2) moist; weak very fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; 20 percent pebbles, 5 percent cobbles, and 35 percent stones; neutral (pH 7.0); abrupt smooth boundary.

BA—3 to 5 inches; brown (10YR 5/3) very cobbly loam, dark brown (10YR 3/3) moist; weak medium platy structure; slightly hard, friable, sticky and plastic; many very fine roots; common very fine tubular pores; 25 percent pebbles and 25 percent cobbles; neutral (pH 7.0); abrupt smooth boundary.

Bw—5 to 9 inches; brown (10YR 5/3) very gravelly clay loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; hard, friable, sticky and plastic; common very fine roots; common very fine pores; 35 percent pebbles and 10 percent cobbles; neutral (pH 6.8); abrupt wavy boundary.

R—9 inches; basalt.

Typical Pedon Location

Map unit in which located: Bakeoven-Reywat-Rock outcrop complex, 30 to 60 percent slopes
Location in survey area: About 10 miles east of Weiser; 800 feet west and 100 feet south of the northeast corner of sec. 35, T. 11 N., R. 4 W.

Range in Characteristics

Profile:
Depth to bedrock—less than 10 inches

Baldock Series

Taxonomic class: Fine-loamy, mixed (calcareous), mesic Typic Haplaquepts

Setting

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderate
Landform: Alluvial fans and stream terraces
Parent material: Kind—alluvium; source—mixed
Slope range: 0 to 2 percent
Elevation: 2,100 to 2,300 feet
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—48 to 52 degrees F
Frost-free period—150 to 155 days

Typical Pedon Description

Ak—0 to 7 inches; gray (10YR 5/1) silt loam, very dark grayish brown (10YR 3/2) moist, gray (10YR 6/1) crushed; weak medium subangular blocky structure parting to weak fine granular; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many fine tubular pores; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

ABk—7 to 15 inches; gray (10YR 5/1) silt loam, very dark gray (10YR 3/1) moist, gray (10YR 6/1) crushed; weak coarse subangular blocky structure parting to weak fine granular; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots and few medium roots; many fine tubular pores; strongly effervescent; spots of lime; moderately alkaline (pH 8.4); clear smooth boundary.

Bk—15 to 28 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist, gray (10YR 6/1) crushed; few fine faint mottles that are dark brown (10YR 3/3) when moist; massive; slightly hard, friable, slightly sticky and slightly plastic; few fine roots; many medium tubular pores; strongly effervescent; moderately alkaline (pH 8.4); gradual smooth boundary.

C1—28 to 38 inches; light brownish gray (10YR 6/2) silt loam, very dark grayish brown (10YR 3/2) moist; few fine distinct mottles that are brown (10YR 4/3) when moist; massive; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots and few coarse roots; many fine tubular pores; slightly effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

2C2—38 to 60 inches; light brownish gray (10YR 6/2) sandy loam, dark grayish brown (10YR 4/2) moist; massive; slightly hard, very friable, nonsticky and nonplastic; many very fine roots; many very fine irregular pores; moderately alkaline (pH 8.0).

Typical Pedon Location

Map unit in which located: Baldock silt loam, 0 to 2 percent slopes

Location in survey area: About 1 mile south of Weiser; 2,700 feet south and 1,750 feet west of the northeast corner of sec. 5, T. 10 N., R. 5 W.

Range in Characteristics

Profile:
Depth to mottles—15 to 20 inches
Depth to water table—24 to 36 inches

Ak, ABk, and Bk horizons:
Value—5 or 6 dry, 3 or 4 moist
Chroma—1 or 2 dry or moist

2C horizon:
Texture—dominantly fine sandy loam, sandy loam, or loam, but sand with or without pebbles below a depth of 40 inches in some pedons

Bissell Series

Taxonomic class: Fine-loamy, mixed, mesic Aridic Argixerolls

Setting

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Landform: Alluvial terraces and fan terraces
Parent material: Kind—alluvium; source—mixed
Slope range: 0 to 4 percent
Elevation: 2,100 to 2,500 feet
Climatic data (average annual):
Precipitation—10 to 13 inches
Air temperature—48 to 51 degrees F
Frost-free period—150 to 155 days

Typical Pedon Description

Ap—0 to 9 inches; brown (10YR 5/3) loam with very dark grayish brown (10YR 3/2) coatings, very dark grayish brown (10YR 3/2) moist; strong fine granular structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine roots; many very fine irregular pores; neutral (pH 6.8); clear wavy boundary.

BA—9 to 20 inches; brown (10YR 5/3) clay loam, very dark grayish brown (10YR 3/2) moist; weak medium and coarse prismatic structure parting to strong fine and medium subangular blocky; very hard, very firm, slightly sticky and slightly plastic; common very fine roots and few fine roots; many very fine tubular pores and few fine tubular pores; many distinct very dark gray (10YR 3/1) clay films on faces of peds and in pores; neutral (pH 6.8); clear wavy boundary.

Bt—20 to 35 inches; pale brown (10YR 6/3) clay loam, dark grayish brown (10YR 4/2) moist; weak medium prismatic structure parting to strong medium subangular blocky; very hard, firm, sticky and plastic; common very fine roots and few fine roots; many very fine tubular pores and common fine tubular pores; many distinct very dark grayish brown (10YR 3/2) clay films on faces of peds and in pores; neutral (pH 7.0); diffuse smooth boundary.

BCt—35 to 48 inches; pale brown (10YR 6/3) clay loam, dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine tubular pores and few fine tubular pores; few faint clay films on faces of peds and in pores; neutral (pH 7.2); diffuse smooth boundary.

C1—48 to 55 inches; pale brown (10YR 6/3) loam, dark brown (10YR 3/3) moist; moderate fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine roots; common very fine tubular pores; 5 percent fine pebbles; neutral (pH 7.2); abrupt wavy boundary.

2C2—55 to 60 inches; light brownish gray (10YR 6/2) very gravelly loamy coarse sand, dark brown (10YR 3/3) moist; single grain; loose, nonsticky and nonplastic; 45 percent pebbles.

Typical Pedon Location

Map unit in which located: Bissell loam, 0 to 2 percent slopes
Location in survey area: About 0.5 mile west of Weiser; 1,150 feet west and 680 feet south of the northeast corner of sec. 36, T. 11 N., R. 6 W.

Range in Characteristics

Profile:
Thickness of mollic epipedon—12 to 20 inches
Depth to mottles—40 to 60 inches

A1 or Ap horizon:
Reaction—neutral or slightly acid

Bt horizon:
Texture—clay loam or sandy clay loam
Clay content—25 to 35 percent

Blackwell Series

Taxonomic class: Fine-loamy, mixed Typic Cryaquolls

Setting

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderately slow
Landform: Stream terraces
Parent material: Kind—alluvium; source—basalt and granite
Slope range: 0 to 5 percent
Elevation: 3,800 to 4,900 feet
Climatic data (average annual):
Precipitation—22 to 25 inches
Air temperature—39 to 42 degrees F
Frost-free period—60 to 70 days

Typical Pedon Description

A1—0 to 10 inches; dark gray (10YR 4/1) clay loam, black (10YR 2/1) moist; strong medium and coarse granular structure; hard, firm, sticky and plastic; common very fine roots; many fine and very fine tubular pores; neutral (pH 6.6); gradual smooth boundary.

A2—10 to 20 inches; dark grayish brown (10YR 4/2) clay loam, black (10YR 2/1) moist; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; common very fine tubular pores; slightly acid (pH 6.4); gradual smooth boundary.

Cg1—20 to 29 inches; gray (5Y 5/1) silt loam, very dark gray (5Y 3/1) moist; few fine distinct dark yellowish brown (10YR 4/4) mottles; massive; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; slightly acid (pH 6.1); clear smooth boundary.

Cg2—29 to 38 inches; gray (5Y 5/1) clay loam, dark gray (5Y 4/1) moist; few fine distinct dark yellowish brown (10YR 4/4) mottles; massive; hard, firm, sticky and plastic; few very fine roots; slightly acid (pH 6.1); clear smooth boundary.

2C—38 to 60 inches; grayish brown (10YR 5/2) stratified gravelly sand and sandy clay loam, very dark grayish brown (10YR 3/2) moist; single grain; loose, nonsticky and nonplastic; 20 percent pebbles; slightly acid (pH 6.1).

Typical Pedon Location

Map unit in which located: Blackwell clay loam, 0 to 5 percent slopes
Location in survey area: About 0.2 mile south of New Meadows; 1,290 feet east and 100 feet north of the southwest corner of sec. 24, T. 19 N., R. 1 E.

Range in Characteristics

Profile:
Depth to water table—2 to 30 inches
Depth to sandy material—20 to 40 inches

A horizon:
Value—3 or 4 dry, 1 or 2 moist
Chroma—1 or 2 dry or moist

Cg horizon:
Hue—10YR to 5Y
Value—5 or 6 dry, 3 or 4 moist
Chroma—1 or 2 dry or moist

Taxadjunct Features

The Blackwell soils in this survey area have a thicker mollic epipedon than is typical for the Blackwell series. This difference, however, does not significantly affect use and management.

Bluebell Series

Taxonomic class: Loamy-skeletal, mixed Argic Pachic Cryoborolls

Setting

Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderately slow
Landform: Mountains
Parent material: Kind—colluvium and residuum; source—basalt
Slope range: 5 to 65 percent
Elevation: 4,100 to 6,100 feet
Climatic data (average annual):
Precipitation—22 to 26 inches
Air temperature—39 to 42 degrees F
Frost-free period—65 to 75 days

Typical Pedon Description

Oe—1 inch to 0; partially decomposed twigs and needles.

A1—0 to 3 inches; dark grayish brown (10YR 4/2) cobbly loam, very dark brown (10YR 2/2) moist; moderate very fine and fine granular structure; soft, very friable, slightly sticky and slightly plastic; many fine and very fine roots; many fine irregular pores; 5 percent pebbles and 25 percent cobbles; neutral (pH 6.6); clear smooth boundary.

A2—3 to 10 inches; dark grayish brown (10YR 4/2) cobbly loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium granular structure; soft, friable, sticky and plastic; many very fine and fine roots and few coarse roots;

many very fine and fine irregular pores; 5 percent pebbles and 25 percent cobbles; neutral (pH 6.7); gradual smooth boundary.

AB—10 to 18 inches; dark grayish brown (10YR 4/2) very gravelly clay loam, dark brown (7.5YR 3/2) moist; weak fine subangular blocky structure parting to moderate fine and medium granular; slightly hard, friable, sticky and plastic; few fine and coarse roots; many very fine and fine irregular pores; 45 percent pebbles and 15 percent cobbles; slightly acid (pH 6.3); clear smooth boundary.

Bt—18 to 24 inches; brown (7.5YR 4/2) very gravelly clay loam, dark brown (7.5YR 3/2) moist; moderate fine and medium subangular blocky structure; hard, firm, sticky and plastic; few medium roots; many fine irregular pores; 45 percent pebbles and 15 percent cobbles; few distinct clay films on faces of peds and in pores; slightly acid (pH 6.5); clear smooth boundary.

R—24 inches; basalt with Bt horizon material in cracks.

Typical Pedon Location

Map unit in which located: Bluebell cobbly loam, 5 to 35 percent slopes

Location in survey area: About 6 miles southeast of New Meadows; 2,000 feet west and 10 feet north of the southeast corner of sec. 16, T. 18 N., R. 2 E.

Range in Characteristics

Profile:
Thickness of mollic epipedon—20 to 35 inches
Depth to bedrock—20 to 40 inches

A horizon:
Hue—10YR or 7.5YR
Value—3 or 4 dry, 2 or 3 moist
Chroma—1 or 2 dry or moist

Bt horizon:
Value—4 or 5 dry, 2 or 3 moist
Chroma—2 or 3 dry or moist
Texture—very gravelly loam or very gravelly clay loam
Rock fragment content—50 to 60 percent

Bluesprin Family

Taxonomic class: Loamy-skeletal, mixed, mesic Ultic Argixerolls

Setting

Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderately slow
Landform: Mountains
Parent material: Kind—residuum; source—granite and some basalt
Slope range: 30 to 60 percent
Elevation: 3,500 to 3,800 feet
Climatic data (average annual):
Precipitation—23 to 25 inches
Air temperature—46 to 48 degrees F
Frost-free period—115 to 125 days

Sample Pedon Description

A—0 to 4 inches; grayish brown (10YR 5/2) extremely stony loam, dark grayish brown (10YR 4/2) moist; moderate fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine roots; many very fine irregular pores; 60 percent stones; slightly acid (pH 6.2); clear smooth boundary.

BA—4 to 12 inches; brown (10YR 4/3) coarse sandy loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure parting to moderate fine granular; soft, very friable, nonsticky and nonplastic; many very fine roots; many very fine irregular pores; neutral (pH 6.6); abrupt wavy boundary.

Bt—12 to 16 inches; brown (10YR 4/3) very gravelly clay loam, dark brown (10YR 3/3) moist; strong medium subangular blocky structure; hard, firm, sticky and plastic; common very fine roots; common very fine tubular pores; 55 percent pebbles; common faint clay films on faces of peds; neutral (pH 6.6); abrupt wavy boundary.

C—16 to 23 inches; granite weathering to brown (10YR 4/3) very gravelly sandy loam, dark brown (10YR 3/3) moist; few very fine roots; 55 percent pebbles; clear wavy boundary.

R—23 inches; granite.

Sample Pedon Location

Map unit in which located: Bluesprin family, 30 to 60 percent slopes

Location in survey area: About 12 miles northwest of Council; 1,500 feet north and 1,150 feet west of the southeast corner of sec. 28, T. 18 N., R. 2 W.

Range in Characteristics

Profile:
Base saturation—50 to 75 percent
Depth to bedrock—20 to 40 inches
Particle-size control section—averages 35 to 90 percent rock fragments

Brody Series

Taxonomic class: Ashy-skeletal Typic Vitricryands

Setting

Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Landform: Mountains
Parent material: Kind—residuum; source—basalt
Slope range: 20 to 65 percent
Elevation: 4,000 to 5,200 feet
Climatic data (average annual):
Precipitation—30 to 34 inches
Air temperature—38 to 42 degrees F
Frost-free period—60 to 80 days

Typical Pedon Description

Oi—3 inches to 1 inch; leaves, twigs, cones, and needles.
Oe—1 inch to 0; partially decomposed leaves, twigs, cones, and needles.
Bs1—0 to 3 inches; brown (7.5YR 5/3) loam, dark brown (7.5YR 3/3) moist; strong very fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine roots and few medium and coarse roots; many very fine irregular pores; moderately acid (pH 6.0); abrupt smooth boundary.
Bs2—3 to 14 inches; brown (7.5YR 5/4) loam, dark brown (7.5YR 3/4) moist; strong very fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine roots and few medium roots; many very fine irregular pores; 10 percent pebbles and cobbles; moderately acid (pH 6.0); abrupt smooth boundary.
Bs3—14 to 26 inches; brown (7.5YR 5/4) very gravelly loam, dark brown (7.5YR 3/4) moist; weak fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; 55 percent pebbles; slightly acid (pH 6.4); clear smooth boundary.
BCs—26 to 35 inches; brown (7.5YR 5/4) very gravelly loam, brown (7.5YR 4/4) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine roots; many very fine irregular pores; 55 percent pebbles; slightly acid (pH 6.4); gradual irregular boundary.
R—35 inches; basalt.

Typical Pedon Location

Map unit in which located: Brody-Culdecole complex, 30 to 65 percent slopes
Location in survey area: About 2 miles southwest of Tamarack; 853 feet north and 450 feet east of the southwest corner of sec. 35, T. 19 N., R. 1 W.

Range in Characteristics

Profile:
Thickness of volcanic ash mantle—10 to 14 inches
Depth to bedrock—20 to 40 inches

Bs1 and Bs2 horizons:
Hue—7.5YR or 10YR
Bulk density—0.90 to 1.00 gram per cubic centimeter

Brownlee Series

Taxonomic class: Fine-loamy, mixed, mesic Ultic Argixerolls

Setting

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Landform: Foothills and lacustrine terraces
Parent material: Kind—alluvium; source—acid igneous rock
Slope range: 1 to 35 percent
Elevation: 2,500 to 4,000 feet
Climatic data (average annual):
Precipitation—15 to 17 inches
Air temperature—45 to 47 degrees F
Frost-free period—110 to 120 days

Typical Pedon Description

A1—0 to 2 inches; grayish brown (10YR 5/2) sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine roots; many very fine and fine irregular pores; slightly acid (pH 6.2); abrupt smooth boundary.
A2—2 to 12 inches; dark grayish brown (10YR 4/2) sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine and medium subangular blocky structure parting to moderate fine granular; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots and few medium roots; many very fine irregular pores and common fine irregular pores; slightly acid (pH 6.2); clear smooth boundary.
Bt1—12 to 18 inches; brown (7.5YR 5/4) sandy clay loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few fine and medium roots; many very fine and fine tubular pores and common fine irregular pores; few faint clay films on faces of peds and in pores; slightly acid (pH 6.4); clear smooth boundary.

Bt2—18 to 32 inches; brown (7.5YR 5/4) sandy clay loam, dark yellowish brown (10YR 3/4) moist; weak medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few fine and medium roots; many very fine and common fine tubular and irregular pores; common faint clay films on faces of peds and in pores; slightly acid (pH 6.4); abrupt smooth boundary.

BC—32 to 43 inches; strong brown (7.5YR 5/6) sandy loam, dark brown (7.5YR 3/4) moist; massive; slightly hard, friable, nonsticky and nonplastic; few fine roots; common very fine tubular pores and few fine irregular pores; slightly acid (pH 6.2); abrupt wavy boundary.

C—43 to 60 inches; reddish yellow (7.5YR 6/6) and light yellowish brown (10YR 6/4) stratified loamy coarse sand and coarse sand, dark brown (7.5YR 4/4) and strong brown (7.5YR 4/6) moist; single grain; loose; few very fine roots; slightly acid (pH 6.2).

Typical Pedon Location

Map unit in which located: Deshler-Brownlee complex, 20 to 30 percent slopes

Location in survey area: About 9 miles east of Midvale; 205 feet west and 815 feet south of the northeast corner of sec. 15, T. 13 N., R. 2 E.

Range in Characteristics

A horizon:
Value—4 or 5 dry, 2 or 3 moist
Chroma—2 or 3 dry or moist

Bt horizon:
Chroma—4 to 6 dry, 3 or 4 moist
Texture—clay loam or sandy clay loam

C horizon:
Hue—10YR or 7.5YR
Value—5 or 6 dry, 4 or 5 moist
Chroma—4 to 6 dry or moist
Texture—loamy coarse sand or coarse sand

Bryan Series

Taxonomic class: Sandy, mixed Entic Cryumbrepts

Setting

Depth class: Very deep
Drainage class: Excessively drained
Permeability: Very rapid
Landform: Mountains
Parent material: Kind—residuum; source—quartz-diorite and granite
Slope range: 40 to 60 percent
Elevation: 4,200 to 6,000 feet
Climatic data (average annual):
Precipitation—25 to 35 inches
Air temperature—36 to 40 degrees F
Frost-free period—30 to 80 days

Typical Pedon Description

Oi—3 to 2 inches; slightly decomposed needles, leaves, twigs, and cones.

Oe—2 inches to 0; fibrous, moderately decomposed needles, leaves, twigs, and cones.

A—0 to 14 inches; brown (10YR 5/3) coarse sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine roots and few medium and coarse roots; many very fine irregular pores; slightly acid (pH 6.4); clear wavy boundary.

C1—14 to 20 inches; pale brown (10YR 6/3) loamy coarse sand, brown (10YR 4/3) moist; massive; slightly hard, very friable, nonsticky and nonplastic; many very fine roots and few coarse roots; many very fine irregular pores; 1 percent pebbles; slightly acid (pH 6.4); clear wavy boundary.

C2—20 to 36 inches; pale brown (10YR 6/3) loamy coarse sand, brown (10YR 4/3) moist; massive; slightly hard, very friable, nonsticky and nonplastic; many very fine roots and few medium roots; many very fine irregular pores; 10 percent pebbles; one 3-millimeter-thick clayey lamella; slightly acid (pH 6.4); clear wavy boundary.

C3—36 to 60 inches; very pale brown (10YR 7/3) gravelly loamy coarse sand, brown (10YR 5/3) moist; massive; slightly hard, very friable, nonsticky and nonplastic; few very fine and coarse roots; common very fine irregular pores; 20 percent pebbles; one 2-millimeter-thick clayey lamella; slightly acid (pH 6.2).

Typical Pedon Location

Map unit in which located: Bryan coarse sandy loam, 40 to 60 percent slopes

Location in survey area: About 6 miles east of New Meadows; about 1,800 feet south and 650 feet west of the northeast corner of sec. 28, T. 19 N., R. 2 E.

Range in Characteristics

A horizon:
Value—4 or 5 dry
Base saturation—40 to 50 percent

C horizon:
Value—6 to 8 dry, 4 to 6 moist
Chroma—3 or 4 dry or moist
Base saturation—45 to 65 percent

Cabarton Series

Taxonomic class: Fine, montmorillonitic Typic Cryaquolls

Setting

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Slow
Landform: Stream terraces
Parent material: Kind—alluvium; source—basalt and some granite
Slope range: 0 to 5 percent
Elevation: 3,800 to 4,800 feet
Climatic data (average annual):
Precipitation—22 to 24 inches
Air temperature—36 to 43 degrees F
Frost-free period—60 to 70 days

Typical Pedon Description

Ap—0 to 12 inches; gray (10YR 5/1) silty clay loam, very dark gray (10YR 3/1) moist; strong very fine and fine granular structure; slightly hard, friable, sticky and plastic; many very fine roots; many very fine and fine irregular pores; slightly acid (pH 6.4); abrupt smooth boundary.

2C—12 to 16 inches; light gray (10YR 7/1) silt, very dark gray (10YR 3/1) moist; weak thick platy structure parting to moderate fine granular; hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine vesicular pores; slightly acid (pH 6.2); abrupt smooth boundary.

3Agb—16 to 26 inches; dark gray (10YR 4/1) clay, black (N 2/0) moist; strong medium prismatic structure and moderate medium and coarse subangular blocky structure; very hard, very firm, very sticky and very plastic; common very fine roots; few very fine tubular pores; coatings of 2C horizon material on peds; neutral (pH 6.6); gradual smooth boundary.

3Cg1—26 to 40 inches; gray (5Y 6/1) clay, very dark grayish brown (10YR 3/2) moist; dark grayish brown (10YR 4/2) and black (10YR 2/1) coatings on faces of peds; massive; very hard, extremely firm, very sticky and very plastic; few very fine roots; few very fine tubular pores; neutral (pH 6.8); gradual smooth boundary.

3Cg2—40 to 60 inches; gray (5Y 6/1) clay loam, dark grayish brown (2.5Y 4/2) moist; dark grayish brown (10YR 4/2) coatings on faces of peds; many fine and medium distinct dark yellowish brown (10YR 3/4 and 4/4) mottles; massive; hard, firm, sticky and plastic; neutral (pH 6.8).

Typical Pedon Location

Map unit in which located: Cabarton silty clay loam, 0 to 5 percent slopes
Location in survey area: About 1 mile south of New Meadows; 2,590 feet south and 1,450 feet east of the northwest corner of sec. 25, T. 19 N., R. 1 E.

Range in Characteristics

Profile:
Depth to water table—6 to 18 inches

A horizon:
Value—5 or 6 dry, 2 or 3 moist
Chroma—1 or 2 dry or moist

Cashmere Series

Taxonomic class: Coarse-loamy, mixed, mesic Aridic Haploxerolls

Setting

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Landform: Fan terraces
Parent material: Kind—sandy alluvium; source—granite
Slope range: 2 to 12 percent
Elevation: 2,100 to 2,500 feet
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 51 degrees F
Frost-free period—150 to 155 days

Typical Pedon Description

A1—0 to 3 inches; grayish brown (10YR 5/2) sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many fine roots; many very fine irregular pores; neutral (pH 6.7); abrupt smooth boundary.

A2—3 to 11 inches; grayish brown (10YR 5/2) sandy loam, very dark grayish brown (10YR 3/2) moist; weak coarse granular structure; soft, very friable, nonsticky and nonplastic; many fine roots; many fine irregular pores; neutral (pH 6.7); clear smooth boundary.

Bw—11 to 25 inches; brown (10YR 5/3) sandy loam, dark brown (10YR 3/2) moist; weak coarse subangular blocky structure; soft, very friable, nonsticky and nonplastic; many fine roots; many very fine irregular pores; neutral (pH 6.8); gradual smooth boundary.
C—25 to 60 inches; pale brown (10YR 6/3) sandy loam, dark brown (10YR 4/3) moist; massive; soft, very friable, nonsticky and nonplastic; common fine roots; few fine and medium irregular pores; neutral (pH 7.0).

Typical Pedon Location

Map unit in which located: Cashmere sandy loam, 2 to 4 percent slopes
Location in survey area: About 7 miles southeast of Weiser; 1,800 feet south and 200 feet west of the northeast corner of sec. 36, T. 10 N., R. 5 W.

Range in Characteristics

A horizon:
Value—4 or 5 dry, 3 or 4 moist
Chroma—2 or 3 dry or moist

Bw horizon:
Value—5 or 6 dry, 3 or 4 moist
Chroma—2 or 3 dry or moist
Content of organic matter—less than 1 percent
Texture—fine sandy loam, sandy loam, or coarse sandy loam

C horizon:
Value—5 or 6 dry, 3 or 4 moist
Chroma—2 or 3 dry or moist
Texture—dominantly fine sandy loam, sandy loam, or coarse sandy loam, but loamy sand below a depth of 40 inches in some pedons

Catherine Series

Taxonomic class: Fine-silty, mixed, mesic Cumulic Haplaquolls

Setting

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderate
Landform: Stream terraces
Parent material: Kind—alluvium; source—basalt and granite
Slope range: 0 to 3 percent
Elevation: 2,500 to 3,500 feet
Climatic data (average annual):
Precipitation—18 to 22 inches
Air temperature—48 to 52 degrees F
Frost-free period—130 to 140 days

Typical Pedon Description

Ap—0 to 10 inches; dark gray (10YR 4/1) silt loam, black (10YR 2/1) moist; moderate fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots and few fine roots; many very fine irregular pores; neutral (pH 6.8); abrupt smooth boundary.
A1—10 to 18 inches; dark gray (10YR 4/1) silt loam, black (10YR 2/1) moist; moderate fine and medium granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; neutral (pH 6.8); clear smooth boundary.
A2—18 to 22 inches; dark gray (10YR 4/1) silt loam, black (10YR 2/1) moist; few faint mottles that are dark grayish brown (10YR 4/2) when moist; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common fine roots; many very fine irregular pores; neutral (pH 7.0); clear smooth boundary.
AC—22 to 32 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; common distinct mottles that are brown (10YR 5/3) when moist; weak coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common fine roots; many very fine tubular pores; mildly alkaline (pH 7.4); clear smooth boundary.
C—32 to 60 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; many prominent mottles that are yellowish brown (10YR 5/6) when moist; massive; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; common very fine tubular pores; mildly alkaline (pH 7.4).

Typical Pedon Location

Map unit in which located: Catherine silt loam, 0 to 3 percent slopes
Location in survey area: About 1 mile southeast of Cambridge; 2,680 feet east and 50 feet south of the northwest corner of sec. 14, T. 14 N., R. 3 W.

Range in Characteristics

Profile:
Thickness of mollic epipedon—20 to 60 inches
Depth to mottles—18 to 30 inches
Depth to water table—24 to 48 inches
Particle-size control section—averages 18 to 27 percent clay

A horizon:
Hue—2.5Y or 10YR
Value—3 or 4 dry, 2 or 3 moist
Chroma—2 or less when dry or moist

AC and C horizons:
Hue—2.5Y or 10YR
Value—4 or 5 dry, 3 or 4 moist
Chroma—2 or less when dry or moist

Chilcott Series

Taxonomic class: Fine, montmorillonitic, mesic Abruptic Xerollic Durargids

Setting

Depth class: Moderately deep to a duripan
Drainage class: Well drained
Permeability: Slow
Landform: Fan terraces
Parent material: Kind—loess over unconsolidated sediment; source—mixed
Slope range: 4 to 12 percent
Elevation: 2,400 to 3,000 feet
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 52 degrees F
Frost-free period—150 to 155 days

Typical Pedon Description

Ap—0 to 7 inches; light grayish brown (10YR 6/2) silt loam, dark grayish brown (10YR 4/2) moist; weak thick platy structure; slightly hard, friable, nonsticky and nonplastic; many very fine roots; many fine vesicular pores; neutral (pH 6.6); abrupt wavy boundary.
Bt1—7 to 18 inches; grayish brown (10YR 5/2) silty clay loam, dark brown (10YR 4/3) moist; moderate medium prismatic structure parting to moderate medium and coarse subangular blocky; very hard, firm, slightly sticky and slightly plastic; common very fine roots; common fine tubular pores; many distinct clay films on faces of peds and in pores; mildly alkaline (pH 7.4); clear wavy boundary.
Bt2—18 to 26 inches; brown (10YR 5/3) clay, dark brown (10YR 4/3) moist; moderate medium prismatic structure; very hard, very firm, sticky and plastic; few fine roots; few fine tubular pores; many prominent clay films on faces of peds and in pores; mildly alkaline (pH 7.6); clear wavy boundary.
Btk—26 to 40 inches; grayish brown (10YR 5/3) clay loam, dark brown (10YR 4/3) moist; moderate coarse subangular blocky structure; hard, firm, slightly sticky and slightly plastic; few very fine roots; few fine tubular pores; many distinct clay films on faces of peds and in pores; many splotches of lime on faces of peds; strongly effervescent; moderately alkaline (pH 8.0); abrupt wavy boundary.
2Bqkm—40 to 44 inches; white (10YR 8/2) indurated duripan, very pale brown (10YR 7/4) moist; massive; moderately alkaline (pH 8.0); clear wavy boundary.
2Bk—44 to 60 inches; weakly cemented very gravelly sand; strongly effervescent; 45 percent pebbles; moderately alkaline (pH 8.0).

Typical Pedon Location

Map unit in which located: Chilcott-Vickery silt loams, 4 to 12 percent slopes
Location in survey area: About 6 miles southeast of Weiser; 350 feet west and 1,000 feet north of the southeast corner of sec. 13, T. 10 N., R. 5 W.

Range in Characteristics

Profile:
Depth to abrupt textural change—5 to 10 inches
Depth to calcium carbonates—20 to 30 inches
Depth to duripan—20 to 40 inches

Bt horizon:
Clay content—35 to 60 percent

Clems Series

Taxonomic class: Coarse-loamy, mixed, mesic Xerollic Camborthids

Setting

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Landform: Stream terraces
Parent material: Kind—eolian sand over alluvium; source—mixed
Slope range: 0 to 4 percent
Elevation: 2,100 to 2,300 feet
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 51 degrees F
Frost-free period—150 to 155 days

Typical Pedon Description

Ap—0 to 10 inches; grayish brown (10YR 5/2) fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak very fine granular structure; soft, very friable, nonsticky and nonplastic; many fine roots; many fine and very fine irregular pores; neutral (pH 6.9); abrupt smooth boundary.

Bw1—10 to 20 inches; grayish brown (10YR 5/2) fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak medium and coarse subangular blocky structure; soft, very friable, nonsticky and nonplastic; many fine roots and few coarse roots; many fine and very fine tubular pores; neutral (pH 7.0); clear smooth boundary.

Bw2—20 to 36 inches; brown (10YR 5/3) fine sandy loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many fine roots and few coarse roots; many fine and very fine tubular pores; neutral (pH 7.0); gradual smooth boundary.

C—36 to 56 inches; pale brown (10YR 6/3) fine sandy loam, brown (10YR 4/3) moist; massive; soft, very friable, nonsticky and nonplastic; many fine roots and few coarse roots; many fine and very fine tubular pores; neutral (pH 7.0); abrupt smooth boundary.

2C—56 to 60 inches; brown (10YR 5/3) silt loam, dark brown (10YR 3/3) moist; massive; hard, very firm, sticky and plastic; slightly effervescent; moderately alkaline (pH 8.0).

Typical Pedon Location

Map unit in which located: Clems fine sandy loam, 0 to 2 percent slopes

Location in survey area: About 3 miles south of Weiser; 400 feet west and 640 feet north of the southeast corner of sec. 17, T. 10 N., R. 5 W.

Range in Characteristics

Profile:
Depth to calcium carbonates—45 to 60 inches

A horizon:
Hue—2.5Y or 10YR
Value—5 or 6 dry, 3 or 4 moist
Chroma—2 or 3 dry or moist
Content of organic matter—less than 1 percent

Bw horizon:
Hue—2.5Y or 10YR
Value—5 or 6 dry, 3 or 4 moist

Cranecreek Series

Taxonomic class: Fine-loamy, mixed, mesic Mollic Haploxeralfs

Setting

Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Landform: Foothills
Parent material: Kind—alluvium; source—basalt
Slope range: 2 to 25 percent
Elevation: 2,500 to 4,000 feet
Climatic data (average annual):
Precipitation—12 to 16 inches
Air temperature—47 to 52 degrees F
Frost-free period—110 to 140 days

Typical Pedon Description

A1—0 to 3 inches; light brownish gray (10YR 6/2) loam, very dark grayish brown (10YR 3/2) moist; weak medium platy structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular and tubular pores; neutral (pH 6.9); clear smooth boundary.

A2—3 to 9 inches; light brownish gray (10YR 6/2) loam, very dark grayish brown (10YR 3/2) moist; weak medium and fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; common very fine tubular pores; neutral (pH 6.9); gradual smooth boundary.

A3—9 to 18 inches; light brownish gray (10YR 6/2) loam, brown (10YR 5/3) and dark brown (10YR 3/3) moist; weak medium and coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; common very fine tubular pores; neutral (pH 6.9); gradual smooth boundary.

Bt1—18 to 30 inches; brown (10YR 5/3) clay loam, dark brown (10YR 3/3) moist; weak medium and coarse subangular blocky structure; slightly hard, friable, sticky and plastic; few very fine roots; few very fine tubular pores; few faint clay films in pores; neutral (pH 7.0); gradual wavy boundary.

Bt2—30 to 35 inches; strong brown (7.5YR 5/6) clay, brown (7.5YR 4/4) moist; moderate medium subangular blocky structure; hard, firm, sticky and plastic; few distinct clay films on faces of peds and in pores; neutral (pH 7.0); clear smooth boundary.

2Cr—35 inches; moderately weathered semiconsolidated sediment consisting dominantly of basic igneous rock fragments; common clay films in cracks; slightly effervescent.

Typical Pedon Location

Map unit in which located: Cranecreek-Reywat complex, 2 to 25 percent slopes

Location in survey area: About 3 miles south of Crane Creek Reservoir; 2,100 feet west and 680 feet north of the southeast corner of sec. 2, T. 11 N., R. 2 W.

Range in Characteristics

Profile:
Depth to paralithic contact—20 to 40 inches

A horizon:
Value—5 to 8 dry, 3 or 4 moist
Chroma—2 to 5 dry or moist

Bt horizon:
Hue—10YR or 7.5YR
Value—4 to 7 dry, 3 or 4 moist
Chroma—3 to 7 dry or moist
Texture—clay loam or clay
Rock fragment content—0 to 10 percent

Culdecole Series

Taxonomic class: Fine-loamy, mixed Andic Cryoboralfs

Setting

Depth class: Deep
Drainage class: Well drained
Permeability: Moderately slow
Landform: Mountains
Parent material: Kind—residuum; source—volcanic ash over basalt
Slope range: 4 to 45 percent
Elevation: 4,000 to 5,200 feet
Climatic data (average annual):
Precipitation—30 to 34 inches
Air temperature—38 to 42 degrees F
Frost-free period—60 to 80 days

Typical Pedon Description

Oi—2 inches to 1 inch; needles, cones, twigs, and leaves.
Oe—1 inch to 0; moderately decomposed needles, cones, twigs, and leaves.
A—0 to 2 inches; yellowish brown (10YR 5/4) loam, dark brown (7.5YR 3/4) moist; weak thick platy structure parting to weak very fine granular; soft, very friable, nonsticky and nonplastic; many very fine and fine roots; many very fine irregular pores; slightly acid (pH 6.2); abrupt smooth boundary.
Bs1—2 to 8 inches; brown (7.5YR 5/4) loam, dark brown (7.5YR 3/4) moist; weak very fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine roots; many very fine irregular pores; slightly acid (pH 6.2); abrupt smooth boundary.
Bs2—8 to 14 inches; brown (7.5YR 5/4) silt loam, dark brown (7.5YR 3/4) moist; moderate medium granular structure; slightly hard, friable, slightly sticky and slightly plastic; many fine roots and few coarse roots; many very fine irregular pores; slightly acid (pH 6.2); clear smooth boundary.
2Btb1—14 to 22 inches; brown (7.5YR 5/4) clay loam, dark brown (7.5YR 3/4) moist; moderate medium and coarse subangular blocky structure; hard, firm, sticky and plastic; common fine roots and few coarse roots; few very fine tubular pores; few faint clay films in pores; 5 percent pebbles; slightly acid (pH 6.2); gradual smooth boundary.
2Btb2—22 to 34 inches; brown (7.5YR 5/4) clay loam, dark brown (7.5YR 3/4) moist; strong medium and coarse subangular blocky structure; hard, firm, sticky and plastic; few very fine roots; few very fine tubular pores; common faint clay films on faces of peds and in pores; slightly acid (pH 6.2); gradual smooth boundary.
2BCtb—34 to 50 inches; brown (7.5YR 5/4) cobbly clay loam, dark brown (7.5YR 3/4) moist; moderate medium and coarse subangular blocky structure; hard, firm, sticky and plastic; few very fine tubular pores; many distinct clay films on faces of peds and in pores; 15 percent cobbles; slightly acid (pH 6.2); gradual wavy boundary.
R—50 inches; basalt.

Typical Pedon Location

Map unit in which located: Brody-Culdecole complex, 30 to 65 percent slopes
Location in survey area: About 2 miles southwest of Tamarack; 1,100 feet north and 850 feet west of the southwest corner of sec. 35, T. 19 N., R. 1 N.

Range in Characteristics

Profile:
Thickness of volcanic ash mantle—11 to 14 inches
Depth to bedrock—40 to 60 inches
Bulk density—0.90 to 1.00 gram per cubic centimeter

A horizon:
Hue—10YR or 7.5YR
Value—4 or 5 dry, 3 or 4 moist
Chroma—3 or 4 dry, 2 to 4 moist

Bs horizon:
Hue—10YR or 7.5YR
Value—4 or 5 dry, 3 or 4 moist
Chroma—3 or 4 dry, 2 to 4 moist

2Btb horizon:
Hue—10YR or 7.5YR
Value—5 or 6 dry, 3 or 4 moist
Chroma—3 to 6 dry or moist
Texture—clay loam or silty clay loam
Clay content—27 to 35 percent
Rock fragment content—0 to 15 percent

Dagor Series

Taxonomic class: Fine-loamy, mixed, mesic Cumulic Haploxerolls

Setting

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Landform: Stream terraces
Parent material: Kind—alluvium; source—mixed
Slope range: 2 to 4 percent
Elevation: 2,500 to 3,000 feet
Climatic data (average annual):
Precipitation—17 to 19 inches
Air temperature—45 to 47 degrees F
Frost-free period—120 to 130 days

Typical Pedon Description

Ap—0 to 10 inches; dark grayish brown (10YR 4/2) loam, very dark brown (10YR 2/2) moist; weak fine granular structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; mildly alkaline (pH 7.6); abrupt smooth boundary.

A—10 to 17 inches; dark grayish brown (10YR 4/2) loam, very dark brown (10YR 2/2) moist; moderate fine granular structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine roots and common fine roots; many very fine irregular pores; mildly alkaline (pH 7.6); clear smooth boundary.

Bw1—17 to 23 inches; dark grayish brown (10YR 4/2) loam, very dark brown (10YR 2/2) moist; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; many very fine tubular pores; mildly alkaline (pH 7.4); abrupt wavy boundary.

Bw2—23 to 33 inches; light brownish gray (10YR 6/2) loam, very dark grayish brown (10YR 3/2) moist; weak medium and coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; many very fine tubular pores; mildly alkaline (pH 7.6); clear wavy boundary.

Bw3—33 to 60 inches; brown (10YR 5/3) loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; common very fine tubular pores; neutral (pH 7.2).

Typical Pedon Location

Map unit in which located: Dagor loam, 2 to 4 percent slopes

Location in survey area: About 1 mile east of Cambridge; 30 feet west and 1,500 feet south of the northeast corner of sec. 11, T. 14 N., R. 3 W.

Range in Characteristics

Profile:
Thickness of mollic epipedon—20 inches or more

Ap and A horizons:
Value—4 or 5 dry, 2 or 3 moist
Chroma—2 or 3 dry or moist

Bw horizon:
Value—4 or 5 dry, 2 or 3 moist
Chroma—2 to 4 dry or moist

Demast Series

Taxonomic class: Fine-loamy, mixed Argic Pachic Cryoborolls

Setting

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Landform: Mountains
Parent material: Kind—colluvium and residuum; source—basalt
Slope range: 10 to 60 percent
Elevation: 4,000 to 6,000 feet
Climatic data (average annual):
Precipitation—22 to 25 inches
Air temperature—35 to 40 degrees F
Frost-free period—70 to 80 days

Typical Pedon Description

A1—0 to 12 inches; very dark grayish brown (10YR 3/2) loam, very dark brown (10YR 2/2) moist; weak medium and fine subangular blocky structure parting to moderate fine granular; slightly hard, very friable, slightly sticky and slightly plastic; few medium and coarse roots and many very fine and fine roots; many very fine and fine irregular pores; slightly acid (pH 6.2); abrupt smooth boundary.

A2—12 to 20 inches; very dark grayish brown (10YR 3/2) loam, very dark brown (10YR 2/2) moist; weak medium and coarse subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; few medium and coarse roots and many very fine roots; many very fine and fine tubular and irregular pores; slightly acid (pH 6.2); abrupt wavy boundary.

Bt1—20 to 31 inches; dark brown (7.5YR 3/4) gravelly loam, dark brown (10YR 3/3) moist; moderate medium prismatic structure parting to moderate

medium subangular blocky; hard, firm, sticky and plastic; few medium roots and common very fine and fine roots; many very fine and fine tubular and irregular pores; 25 percent fine pebbles; many distinct clay films on faces of peds and in pores; slightly acid (pH 6.2); gradual wavy boundary.

Bt2—31 to 51 inches; dark brown (7.5YR 4/4) gravelly loam, dark brown (10YR 3/3) moist; moderate medium prismatic structure; hard, firm, sticky and plastic; few very fine roots; common very fine tubular pores; 25 percent pebbles; many distinct clay films on faces of peds and in pores; slightly acid (pH 6.2); gradual wavy boundary.

2Bt3—51 to 60 inches; dark brown (7.5YR 4/4) very gravelly loam, dark brown (10YR 3/3) moist; moderate fine and very fine subangular blocky structure; hard, friable, sticky and plastic; few very fine roots; many very fine tubular pores; 35 percent pebbles and 5 percent cobbles; many faint clay films on faces of peds and in pores; slightly acid (pH 6.4).

Typical Pedon Location

Map unit in which located: Demast loam, 10 to 30 percent slopes

Location in survey area: About 2 miles east of New Meadows; 2,600 feet north and 300 feet west of the southeast corner of sec. 17, T. 19 N., R. 2 E.

Range in Characteristics

Profile:
Thickness of mollic epipedon—30 inches or more
O horizon—present in some pedons

A horizon:
Value—3 or 4 dry, 2 or 3 moist
Chroma—2 or 3 dry or moist

Bt horizon:
Hue—10YR or 7.5YR
Value—3 to 5 dry, 2 to 4 moist
Chroma—3 or 4 dry or moist
Rock fragment content—20 to 35 percent

Demasters Series

Taxonomic class: Fine-loamy, mixed, frigid Pachic Ultic Argixerolls

Setting

Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Landform: Mountains
Parent material: Kind—residuum; source—basalt
Slope range: 30 to 75 percent
Elevation: 3,600 to 5,000 feet
Climatic data (average annual):
Precipitation—18 to 22 inches
Air temperature—41 to 44 degrees F
Frost-free period—105 to 115 days

Typical Pedon Description

Oi—1 inch to 0; partially decomposed leaves and twigs.

A1—0 to 4 inches; very dark grayish brown (10YR 3/2) loam, black (10YR 2/1) moist; weak very fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine roots and few medium roots; many very fine irregular pores; neutral (pH 6.8); clear smooth boundary.

A2—4 to 17 inches; very dark grayish brown (10YR 3/2) loam, black (10YR 2/1) moist; weak very fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine irregular pores; neutral (pH 6.8); clear wavy boundary.

Bt1—17 to 25 inches; dark brown (10YR 4/3) loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; slightly hard, firm, slightly sticky and slightly plastic; many fine and very fine roots; many very fine tubular pores; few faint clay films on faces of peds; neutral (pH 6.8); gradual wavy boundary.

Bt2—25 to 36 inches; dark brown (10YR 4/3) very gravelly loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; slightly hard, firm, slightly sticky and slightly plastic; few very fine roots; many very fine tubular pores; 35 percent pebbles and 15 percent cobbles; common faint clay films on faces of peds and in pores; neutral (pH 6.8); gradual wavy boundary.

C—36 to 45 inches; dark yellowish brown (10YR 4/4) very cobbly loam, dark yellowish brown (10YR 3/4) moist; massive; slightly hard, firm, slightly sticky and slightly plastic; few very fine roots; many very fine tubular pores; 50 percent cobbles; neutral (pH 6.8); gradual wavy boundary.

R—45 inches; slightly weathered basalt.

Typical Pedon Location

Map unit in which located: Demasters loam, 50 to 75 percent slope

Location in survey area: About 10 miles southeast of Crane Creek Reservoir; 2,200 feet south and 1,900

feet west of the northeast corner of sec. 33, T. 12 N., R. 1 E.

Range in Characteristics

Profile:
Thickness of mollic epipedon—30 to 50 inches
Depth to bedrock—40 to 60 inches

A horizon:
Value—2 to 4 dry, 1 or 2 moist
Chroma—1 or 2 dry or moist

Bt horizon:
Hue—10YR or 7.5YR
Value—3 or 4 dry, 2 or 3 moist
Chroma—2 or 3 dry or moist

Demoss Series

Taxonomic class: Fine-loamy, mixed, mesic, shallow Typic Durixerolls

Setting

Depth class: Shallow to a duripan
Drainage class: Well drained
Permeability: Slow
Landform: Lacustrine terraces
Parent material: Kind—alluvium over residuum; source—semiconsolidated sediment
Slope range: 2 to 8 percent
Elevation: 2,500 to 3,500 feet
Climatic data (average annual):
Precipitation—16 to 20 inches
Air temperature—48 to 52 degrees F
Frost-free period—120 to 140 days

Typical Pedon Description

A1—0 to 2 inches; dark grayish brown (10YR 4/2) loam, very dark brown (10YR 2/2) moist; moderate thin platy structure parting to weak fine granular; soft, friable, slightly sticky and slightly plastic; common very fine roots; common very fine tubular pores and few very fine irregular pores; neutral (pH 6.7); abrupt smooth boundary.

A2—2 to 5 inches; dark grayish brown (10YR 4/2) loam, very dark brown (10YR 2/2) moist; moderate medium and thick platy structure; hard, firm, sticky and plastic; common very fine roots; common very fine tubular pores and few very fine irregular pores; neutral (pH 6.7); abrupt smooth boundary.

BE—5 to 9 inches; dark brown (10YR 4/3) clay loam, very dark brown (10YR 2/2) moist; moderate medium and coarse subangular blocky structure; very hard, very firm, sticky and plastic; common very fine roots; common very fine tubular pores; neutral (pH 6.8); clear smooth boundary.

Bt—9 to 12 inches; dark brown (10YR 4/3) clay, dark brown (10YR 3/3) moist; strong medium subangular blocky structure; very hard, very firm, very sticky and very plastic; common very fine roots; common very fine tubular pores; many prominent clay films on faces of peds and in pores; neutral (pH 6.8); abrupt smooth boundary.

2Bqm—12 to 17 inches; indurated duripan consisting of semiconsolidated lacustrine sediment; clear smooth boundary.

2Cr—17 inches; pale brown (10YR 6/3) semiconsolidated sediment breaking to sandy loam, dark brown (10YR 3/3) moist; massive; extremely hard, very firm, nonsticky and nonplastic; does not slake in acid or water.

Typical Pedon Location

Map unit in which located: Midvale-Demoss complex, 2 to 4 percent slopes
Location in survey area: About 2 miles north of Midvale; 1,420 feet west and 110 feet south of the northeast corner of sec. 6, T. 13 N., R. 3 W.

Range in Characteristics

Profile:
Depth to duripan—10 to 20 inches
Depth to paralithic contact—12 to 30 inches

A horizon:
Value—4 or 5 dry, 2 or 3 moist
Chroma—2 or 3 dry or moist

Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5 dry, 3 or 4 moist
Chroma—3 or 4 dry or moist
Texture—clay loam or clay

Deshler Series

Taxonomic class: Fine, montmorillonitic, mesic Pachic Argixerolls

Setting

Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Landform: Foothills and lacustrine terraces
Parent material: Kind—residuum; source—volcanic tuff
Slope range: 2 to 60 percent
Elevation: 2,500 to 4,500 feet

Climatic data (average annual):
Precipitation—13 to 16 inches
Air temperature—45 to 50 degrees F
Frost-free period—110 to 145 days

Typical Pedon Description

A—0 to 8 inches; dark grayish brown (10YR 4/2) silty clay loam, very dark grayish brown (10YR 3/2) moist; weak thin platy structure in upper 4 inches and weak thick platy structure in lower part; slightly hard, friable, slightly sticky and slightly plastic; many fine and medium roots; many very fine tubular pores in upper 4 inches and few very fine tubular pores in lower part; neutral (pH 6.8); abrupt smooth boundary.

AB—8 to 15 inches; dark grayish brown (10YR 4/2) silty clay loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; hard, friable, sticky and plastic; common fine and medium roots; many very fine tubular pores; neutral (pH 7.0); clear smooth boundary.

Bt1—15 to 25 inches; dark grayish brown (10YR 4/2) silty clay loam, very dark grayish brown (10YR 3/2) moist; weak medium prismatic structure parting to moderate fine subangular blocky; hard, firm, sticky and plastic; few very fine and fine roots; neutral (pH 7.2); abrupt smooth boundary.

Bt2—25 to 30 inches; very pale brown (10YR 7/4) clay, yellowish brown (10YR 5/4) moist; dark brown (10YR 4/3) coatings on faces of peds; moderate medium prismatic structure parting to moderate fine angular blocky; hard, firm, very plastic and very sticky; few very fine and fine roots; many prominent clay films on faces of peds and in pores; mildly alkaline (pH 7.6); abrupt smooth boundary.

Cr—30 inches; volcanic tuff.

Typical Pedon Location

Map unit in which located: Deshler-Devnot complex, 2 to 30 percent slopes

Location in survey area: About 20 miles northeast of Weiser; 2,420 feet west and 160 feet north of the southeast corner of sec. 33, T. 12 N., R. 2 W.

Range in Characteristics

Profile:
Thickness of mollic epipedon—20 to 30 inches
Depth to paralithic contact—20 to 40 inches

A horizon:
Value—4 or 5 dry, 2 or 3 moist
Chroma—1 to 3 dry or moist
Reaction—neutral or slightly acid

Bt horizon:
Value—4 to 6 dry, 3 to 5 moist
Chroma—2 to 4 dry or moist

Deterson Series

Taxonomic class: Fine, montmorillonitic, mesic Pachic Argixerolls

Setting

Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Landform: Foothills
Parent material: Kind—residuum and colluvium; source—volcanic tuff and basalt
Slope range: 5 to 60 percent
Elevation: 2,500 to 4,500 feet
Climatic data (average annual):
Precipitation—12 to 16 inches
Air temperature—46 to 50 degrees F
Frost-free period—135 to 145 days

Typical Pedon Description

A—0 to 5 inches; grayish brown (10YR 5/2) silt loam, black (10YR 2/1) moist; weak thin platy structure; slightly hard, firm, slightly sticky and slightly plastic; common very fine and fine roots; common fine tubular pores; neutral (pH 7.0); clear smooth boundary.

AB—5 to 23 inches; dark grayish brown (10YR 4/2) silt loam, black (10YR 2/1) moist; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; common fine tubular pores; neutral (pH 7.2); clear smooth boundary.

Bt1—23 to 32 inches; dark grayish brown (10YR 4/2) clay loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; hard, firm, sticky and plastic; common very fine roots; common fine tubular pores; common faint clay films on faces of peds and in pores; neutral (pH 7.2); clear smooth boundary.

Bt2—32 to 60 inches; dark brown (10YR 4/3) clay, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; slightly hard, friable, sticky and plastic; few very fine roots; few very fine tubular

pores; common faint clay films on faces of peds and in pores; mildly alkaline (pH 7.6).

Typical Pedon Location

Map unit in which located: Deterson silt loam, 30 to 60 percent slopes
Location in survey area: About 2 miles north of Weiser; 1,080 feet west and 420 feet north of the southeast corner of sec. 7, T. 11 N., R. 5 W.

Range in Characteristics

Profile:
Thickness of mollic epipedon—20 to 60 inches

A and AB horizons:
Value—2 or 3 moist
Chroma—1 or 2 moist

Bt horizon:
Value—3 or 4 dry or moist
Chroma—2 or 3 dry or moist
Texture—clay, clay loam, or silty clay
Clay content—35 to 45 percent

Devnot Series

Taxonomic class: Clayey, montmorillonitic, mesic Lithic Argixerolls

Setting

Depth class: Shallow
Drainage class: Well drained
Permeability: Slow
Landform: Foothills
Parent material: Kind—residuum; source—basalt, sandstone, and conglomerate
Slope range: 2 to 60 percent
Elevation: 2,300 to 4,500 feet
Climatic data (average annual):
Precipitation—12 to 14 inches
Air temperature—46 to 50 degrees F
Frost-free period—130 to 140 days

Typical Pedon Description

A—0 to 4 inches; grayish brown (10YR 5/2) very stony clay loam, dark brown (10YR 3/3) moist; weak very fine and fine granular structure; hard, firm, sticky and plastic; many very fine roots; many very fine irregular and tubular pores; 5 percent pebbles, 10 percent cobbles, and 25 percent stones; slightly acid (pH 6.4); clear smooth boundary.

BA—4 to 9 inches; dark grayish brown (10YR 4/2) stony clay, dark brown (10YR 3/3) moist; moderate medium and coarse subangular blocky structure; very hard, very firm, very sticky and very plastic; many very fine roots; few very fine tubular pores; 5 percent pebbles, 10 percent cobbles, and 25 percent stones; many distinct clay films on faces of peds; slightly acid (pH 6.4); clear wavy boundary.

Bt—9 to 19 inches; dark grayish brown (10YR 4/2) stony clay, dark brown (10YR 3/3) moist; moderate medium prismatic structure parting to moderate medium subangular blocky; very hard, very firm, very sticky and very plastic; common very fine roots; few very fine tubular pores; 5 percent pebbles and 15 percent stones; many prominent clay films on faces of peds; neutral (pH 6.6); abrupt irregular boundary.

R—19 inches; basalt.

Typical Pedon Location

Map unit in which located: Deshler-Devnot complex, 30 to 60 percent slopes
Location in survey area: About 4 miles southwest of Paddock Reservoir; 1,500 feet east and 2,580 feet south of the northwest corner of sec. 31, T. 10 N., R. 2 W.

Range in Characteristics

Profile:
Rock fragment content—15 to 35 percent
Depth to bedrock—10 to 20 inches
Value—4 or 5 dry, 3 or 4 moist
Chroma—2 or 3 dry or moist

Dishner Series

Taxonomic class: Clayey, montmorillonitic, mesic Lithic Xerollic Haplargids

Setting

Depth class: Shallow
Drainage class: Well drained
Permeability: Slow
Landform: Lacustrine terraces
Parent material: Kind—residuum; source—sandstone and conglomerate
Slope range: 2 to 30 percent
Elevation: 2,300 to 2,700 feet

Climatic data (average annual):
Precipitation—11 to 13 inches
Air temperature—47 to 51 degrees F
Frost-free period—120 to 145 days

Typical Pedon Description

E—0 to 8 inches; light brownish gray (10YR 6/2) extremely stony loam, dark grayish brown (10YR 4/2) moist; moderate thin and medium platy structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; many very fine vesicular pores; 20 percent cobbles and 40 percent stones; neutral (pH 6.6); abrupt smooth boundary.

Bt—8 to 12 inches; pale brown (10YR 6/3) clay, brown (10YR 4/3) moist; strong medium subangular blocky structure; very hard, very firm, very sticky and very plastic; few fine roots; few fine tubular pores; many prominent clay films on faces of peds; neutral (pH 6.9); abrupt wavy boundary.

R—12 inches; sandstone.

Typical Pedon Location

Map unit in which located: Dishner-Haw complex, 2 to 30 percent slopes

Location in survey area: About 8 miles west of Weiser; 60 feet south and 210 feet east of the northwest corner of sec. 16, T. 10 N., R. 4 W.

Range in Characteristics

Profile:
Depth to bedrock—10 to 20 inches

Donnel Series

Taxonomic class: Coarse-loamy, mixed Typic Cryumbrepts

Setting

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Landform: Alluvial fans
Parent material: Kind—alluvium; source—granite
Slope range: 0 to 4 percent
Elevation: 3,800 to 4,800 feet
Climatic data (average annual):
Precipitation—22 to 24 inches
Air temperature—38 to 43 degrees F
Frost-free period—65 to 75 days

Typical Pedon Description

A1—0 to 9 inches; dark grayish brown (10YR 4/2) sandy loam, very dark brown (10YR 2/2) moist; weak very fine and fine granular structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine irregular pores; moderately acid (pH 5.8); clear smooth boundary.

A2—9 to 20 inches; dark grayish brown (10YR 4/2) sandy loam, very dark brown (10YR 2/2) moist; weak fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine roots and few medium roots; common very fine irregular pores; moderately acid (pH 5.8); abrupt smooth boundary.

B2—20 to 23 inches; grayish brown (10YR 5/2) sandy loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine roots; common very fine tubular pores; moderately acid (pH 6.0); clear smooth boundary.

C1—23 to 39 inches; yellowish brown (10YR 5/4) sandy loam, dark yellowish brown (10YR 3/4) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine roots; few very fine tubular pores; moderately acid (pH 6.0); clear smooth boundary.

C2—39 to 60 inches; light yellowish brown (10YR 6/4) loamy sand, dark brown (10YR 4/3) moist; single grain; loose, nonsticky and nonplastic; moderately acid (pH 6.0).

Typical Pedon Location

Map unit in which located: Donnel sandy loam, 0 to 4 percent slopes

Location in survey area: About 1 mile northeast of New Meadows; 30 feet east and 1,400 feet north of the southwest corner of sec. 18, T. 19 N., R. 2 E.

Range in Characteristics

Profile:
Depth to sandy material—30 to 60 inches

A horizon:
Value—4 or 5 dry, 2 to 4 moist
Chroma—2 or 3 dry or moist
Base saturation—35 to 50 percent

B horizon:
Value—5 or 6 dry, 3 or 4 moist

C horizon:
Rock fragment content—0 to 10 percent

Elijah Series

Taxonomic class: Fine-silty, mixed, mesic Xerollic Durargids

Setting

Depth class: Moderately deep to a duripan
Drainage class: Well drained
Permeability: Moderately slow
Landform: Fan terraces
Parent material: Kind—alluvium; source—mixed
Slope range: 4 to 12 percent
Elevation: 2,300 to 3,000 feet
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—47 to 49 degrees F
Frost-free period—150 to 155 days

Typical Pedon Description

A—0 to 12 inches; light brownish gray (10YR 6/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many fine and very fine roots; many fine and very fine irregular pores; neutral (pH 7.2); abrupt smooth boundary.

Bt—12 to 20 inches; very pale brown (10YR 7/3) silty clay loam, brown (10YR 5/3) moist; weak medium prismatic structure parting to moderate fine and medium subangular blocky; hard, friable, sticky and plastic; many very fine roots; many fine and very fine tubular pores; common faint clay films on faces of peds; neutral (pH 7.2); abrupt smooth boundary.

2Bk—20 to 38 inches; light gray (10YR 7/2) silt loam, grayish brown (10YR 5/2) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; strongly effervescent; moderately alkaline (pH 8.0); abrupt smooth boundary.

2Bqkm—38 to 53 inches; white (10YR 8/2) indurated duripan, light gray (10YR 7/2) moist; massive; extremely hard, extremely firm; violently effervescent; moderately alkaline (pH 8.2); clear smooth boundary.

3C—53 to 60 inches; multicolored sand; single grain; loose, nonsticky and nonplastic.

Typical Pedon Location

Map unit in which located: Elijah silt loam, 4 to 8 percent slopes
Location in survey area: About 0.1 mile north of Weiser; 2,610 feet north and 2,590 feet east of the southwest corner of sec. 29, T. 11 N., R. 5 W.

Range in Characteristics

Profile:
Depth to calcium carbonates—15 to 30 inches
Depth to duripan—20 to 40 inches

A horizon:
Value—5 to 7 dry, 3 to 5 moist
Chroma—2 or 3 dry or moist
Reaction—neutral or mildly alkaline

Bt horizon:
Clay content—26 to 35 percent

Falk Series

Taxonomic class: Coarse-loamy over sandy or sandy-skeletal, mixed, nonacid, mesic Aquic Xerorthents

Setting

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderately rapid in the upper part and rapid below
Landform: Stream terraces
Parent material: Kind—alluvium; source—mixed
Slope range: 0 to 3 percent
Elevation: 2,100 to 2,300 feet
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—47 to 52 degrees F
Frost-free period—150 to 155 days

Typical Pedon Description

Ap—0 to 10 inches; light brownish gray (10YR 6/2) fine sandy loam, dark grayish brown (10YR 4/2) moist; weak very fine granular structure; soft, very friable, slightly sticky and nonplastic; common fine roots; many very fine irregular pores; neutral (pH 6.8); abrupt smooth boundary.

C1—10 to 22 inches; light brownish gray (10YR 6/2) fine sandy loam, brown (10YR 4/3) moist; weak very fine granular structure; soft, very friable, slightly sticky and nonplastic; few very fine roots; many very fine irregular pores; neutral (pH 6.8); abrupt smooth boundary.

C2—22 to 27 inches; light gray (10YR 7/2) fine sandy loam, grayish brown (10YR 5/2) moist; single grain; loose, nonsticky and nonplastic; few very fine roots; many very fine and fine irregular pores; neutral (pH 6.8); abrupt smooth boundary.

C3—27 to 38 inches; light gray (10YR 7/2) fine sandy loam, grayish brown (10YR 5/2) moist; massive; soft, very friable, nonsticky and nonplastic; few

fine roots; many very fine irregular pores; neutral (pH 6.8); abrupt smooth boundary.
2C4—38 to 60 inches; mottled very gravelly sand; single grain; loose, nonsticky and nonplastic; 40 percent pebbles.

Typical Pedon Location

Map unit in which located: Falk fine sandy loam, 0 to 2 percent slopes
Location in survey area: About 3 miles south of Weiser; 10 feet south and 300 feet east of the northwest corner of sec. 17, T. 10 N., R. 5 W.

Range in Characteristics

Profile:
Depth to mottles—20 to 40 inches
Depth to sandy or sandy-skeletal material—20 to 40 inches

A horizon:
Hue—2.5Y or 10YR
Value—5 or 6 dry, 3 or 4 moist
Chroma—2 or 3 dry or moist

C horizon:
Hue—2.5Y or 10YR
Value—6 or 7 dry
Chroma—2 or 3 dry or moist

Gem Series

Taxonomic class: Fine, montmorillonitic, mesic Calcic Argixerolls

Setting

Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Landform: Foothills and mountains
Parent material: Kind—residuum; source—basalt
Slope range: 2 to 65 percent
Elevation: 3,000 to 4,800 feet
Climatic data (average annual):
Precipitation—12 to 16 inches
Air temperature—45 to 50 degrees F
Frost-free period—130 to 140 days

Typical Pedon Description

A1—0 to 3 inches; grayish brown (10YR 5/2) very stony clay loam, very dark grayish brown (10YR 3/2) moist; moderate very fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; 20 percent pebbles, 10 percent cobbles, and 15 percent stones; neutral (pH 6.6); abrupt smooth boundary.
A2—3 to 10 inches; grayish brown (10YR 5/2) very stony clay loam, very dark grayish brown (10YR 3/2) moist; moderate fine granular structure; slightly hard, very friable, sticky and plastic; many very fine and fine roots; many very fine irregular pores; 20 percent pebbles, 10 percent cobbles, and 15 percent stones; neutral (pH 6.8); abrupt wavy boundary.
BAt—10 to 14 inches; grayish brown (10YR 5/2) gravelly clay loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure; slightly hard, friable, sticky and plastic; many very fine roots; common very fine tubular pores; 15 percent pebbles and 5 percent cobbles; few faint clay films on faces of peds; neutral (pH 6.8); clear wavy boundary.
Bt—14 to 20 inches; brown (10YR 5/3) clay, dark brown (10YR 3/3) moist; weak medium and coarse prismatic structure; hard, firm, very sticky and very plastic; common very fine roots; common very fine tubular pores; 5 percent pebbles and 5 percent cobbles; many distinct clay films on faces of peds and in pores; neutral (pH 7.2); clear wavy boundary.
Btk—20 to 29 inches; brown (10YR 5/3) clay, dark brown (10YR 4/3) moist; weak medium prismatic structure parting to strong medium subangular blocky; hard, firm, very sticky and very plastic; common fine roots; common very fine tubular pores; 5 percent pebbles and 10 percent cobbles; many distinct clay films on faces of peds; common lime veins that are slightly effervescent; mildly alkaline (pH 7.6); abrupt smooth boundary.
R—29 inches; unweathered basalt; strongly effervescent in cracks.

Typical Pedon Location

Map unit in which located: Gem-Reywat complex, 2 to 30 percent slopes (fig. 13)
Location in survey area: About 5 miles southeast of Paddock Reservoir; 150 feet north and 1,150 feet west of the southeast corner of sec. 31, T. 10 N., R. 1 W.

Range in Characteristics

Profile:
Depth to bedrock—20 to 40 inches

A horizon:
Value—4 or 5 dry, 2 or 3 moist

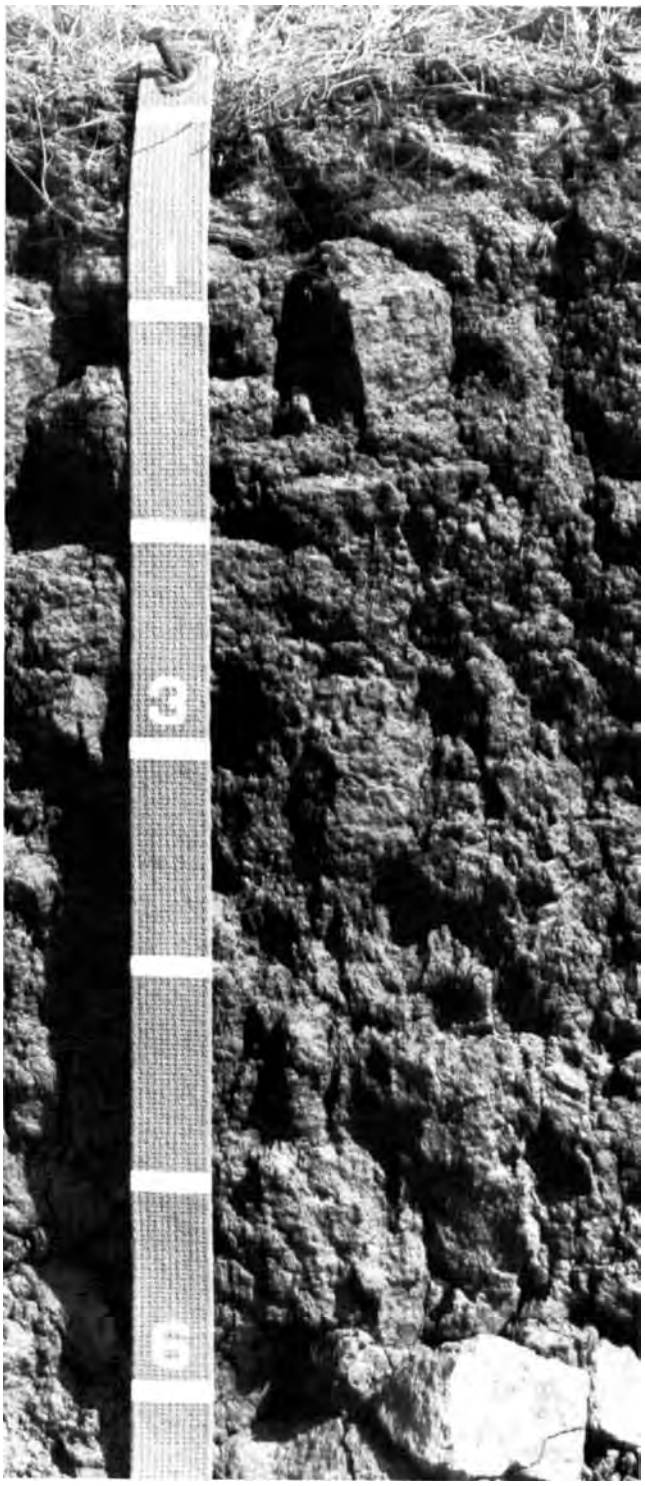

Figure 13.—Profile of Gem very stony clay loam in an area of Gem-Reywat complex, 2 to 30 percent slopes (numerals on tape indicate decimeters). Bedrock is at a depth of about 23 inches (6 decimeters).

Chroma—2 or 3 dry or moist
Bt horizon:
Clay content—35 to 60 percent

Gestrin Series

Taxonomic class: Coarse-loamy, mixed Typic Cryumbrepts

Setting

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderate
Landform: Alluvial fans and stream terraces
Parent material: Kind—alluvium over glacial outwash; source—granite
Slope range: 2 to 8 percent
Elevation: 3,800 to 4,800 feet
Climatic data (average annual):
Precipitation—22 to 24 inches
Air temperature—36 to 41 degrees F
Frost-free period—60 to 70 days

Typical Pedon Description

A1—0 to 10 inches; gray (10YR 5/1) loam, black (10YR 2/1) moist; strong fine and medium granular structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine irregular pores; moderately acid (pH 6.0); clear smooth boundary.

A2—10 to 17 inches; gray (10YR 5/1) loam, black (10YR 2/1) moist; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; common medium tubular pores; moderately acid (pH 6.0); clear smooth boundary.

A3—17 to 20 inches; dark grayish brown (10YR 4/2) loam, very dark brown (10YR 2/2) moist; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few fine roots; common medium tubular pores; moderately acid (pH 6.0); clear irregular boundary.

Bw—20 to 28 inches; brown (7.5YR 5/4) loam, dark brown (7.5YR 4/4) moist; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few fine roots; common medium tubular pores; few faint clay films on faces of peds; moderately acid (pH 6.0); clear smooth boundary.

C1—28 to 33 inches; light yellowish brown (10YR 6/4) loam, dark brown (7.5YR 4/4) moist; many medium distinct reddish brown (5YR 4/4) mottles; massive;

slightly hard, friable, slightly sticky and slightly plastic; few fine roots; common very fine tubular pores; moderately acid (pH 6.0); clear smooth boundary.

C2—33 to 42 inches; brown (10YR 5/3) gravelly loam, dark brown (10YR 3/3) moist; few fine faint strong brown (7.5YR 4/6) mottles; massive; slightly hard, friable, slightly sticky and plastic; common very fine tubular pores; 15 percent pebbles and 5 percent cobbles; moderately acid (pH 6.0); clear smooth boundary.

C3—42 to 60 inches; brown (10YR 5/3) very gravelly sandy loam, dark brown (10YR 3/3) moist; loose, nonsticky and nonplastic; many very fine and fine irregular pores; 20 percent pebbles and 20 percent cobbles; slightly acid (pH 6.4).

Typical Pedon Location

Map unit in which located: Gestrin loam, 4 to 8 percent slopes

Location in survey area: About 1.5 miles northeast of New Meadows; 30 feet south and 2,580 feet west of the northeast corner of sec. 18, T. 19 N., R. 2 E.

Range in Characteristics

A horizon:
Value—4 or 5 dry, 2 or 3 moist
Chroma—1 or 2 dry or moist
Base saturation—30 to 45 percent

Bw horizon:
Hue—10YR or 7.5YR
Texture—loam or coarse sandy loam

Glasgow Series

Taxonomic class: Fine, montmorillonitic, mesic Xerollic Haplargids

Setting

Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Landform: Foothills and lacustrine terraces
Parent material: Kind—residuum; source—volcanic tuff
Slope range: 2 to 60 percent
Elevation: 2,300 to 3,500 feet
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—47 to 52 degrees F
Frost-free period—120 to 145 days

Typical Pedon Description

A—0 to 4 inches; light brownish gray (10YR 6/2) clay loam, very dark grayish brown (10YR 3/2) moist; weak thin platy structure parting to moderate fine and medium granular; soft, friable, slightly sticky and slightly plastic; many very fine roots; common very fine vesicular pores; neutral (pH 6.6); abrupt smooth boundary.

AB—4 to 13 inches; light brownish gray (10YR 6/2) clay loam, very dark grayish brown (10YR 3/2) moist; weak fine and medium subangular blocky structure; slightly hard, friable, sticky and plastic; many very fine roots; common very fine vesicular and tubular pores; common faint clay films on faces of peds and in pores; neutral (pH 6.8); clear smooth boundary.

Bt1—13 to 17 inches; brown (10YR 5/3) clay, dark brown (10YR 3/3) moist; strong very fine and fine prismatic structure parting to moderate fine subangular blocky; very hard, firm, sticky and plastic; common very fine roots; few very fine and fine tubular pores; many prominent clay films on faces of peds and in pores; neutral (pH 7.2); clear smooth boundary.

Bt2—17 to 25 inches; pale brown (10YR 6/3) clay, yellowish brown (10YR 5/4) moist; moderate very fine and fine prismatic structure parting to weak fine subangular blocky; hard, firm, sticky and plastic; common very fine roots; common very fine tubular pores; 14 percent soft angular tuff fragments; many distinct clay films on faces of peds and in pores; mildly alkaline (pH 7.8); clear smooth boundary.

Bk—25 to 38 inches; very pale brown (10YR 7/3) clay loam, yellowish brown (10YR 5/4) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; few very fine roots; few fine irregular pores; 40 percent soft angular tuff fragments; slightly effervescent; moderately alkaline (pH 8.2); abrupt smooth boundary.

R—38 inches; fractured volcanic tuff.

Typical Pedon Location

Map unit in which located: Glasgow clay loam, 20 to 60 percent slopes

Location in survey area: About 2 miles northeast of Weiser; 1,600 feet west and 650 feet south of the northeast corner of sec. 21, T. 11 N., R. 5 W.

Range in Characteristics

Profile:
Depth to bedrock—20 to 40 inches

A horizon:
Value—5 or 6 dry, 3 or 4 moist
Chroma—2 or 3 dry or moist

Bt horizon:
Value—5 or 6 dry, 3 or 4 moist
Chroma—3 or 4 dry or moist
Clay content—35 to 55 percent

Greenleaf Series

Taxonomic class: Fine-silty, mixed, mesic Xerollic Haplargids

Setting

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Landform: Fan terraces
Parent material: Kind—unconsolidated lacustrine sediment; source—mixed
Slope range: 0 to 12 percent
Elevation: 2,100 to 2,400 feet
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 52 degrees F
Frost-free period—150 to 155 days

Typical Pedon Description

Ap—0 to 9 inches; light brownish gray (10YR 6/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; slightly hard, very friable, slightly sticky and slightly plastic; many fine and very fine roots; many fine irregular pores; moderately alkaline (pH 8.2); abrupt smooth boundary.

A—9 to 12 inches; pale brown (10YR 6/3) silt loam, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky structure parting to weak fine granular; slightly hard, very friable, slightly sticky and slightly plastic; many fine and very fine roots; many fine tubular pores; moderately alkaline (pH 7.9); abrupt smooth boundary.

Bt—12 to 21 inches; grayish brown (10YR 5/2) silty clay loam, brown (10YR 4/2) moist; moderate medium prismatic structure parting to moderate coarse subangular blocky; hard, firm, sticky and plastic; common fine and very fine roots; many fine tubular pores; many distinct dark brown (10YR 3/3) clay films on faces of peds and in pores; moderately alkaline (pH 8.0); clear smooth boundary.

Bk1—21 to 26 inches; very pale brown (10YR 7/3) silt loam, brown (10YR 5/3) moist; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common fine and very fine roots; many fine and very fine tubular pores; strongly effervescent; moderately alkaline (pH 8.2); clear smooth boundary.

Bk2—26 to 38 inches; very pale brown (10YR 8/3) silt loam, pale brown (10YR 6/3) moist; moderate medium and thin platy structure; slightly hard, friable, slightly sticky and slightly plastic; common fine and very fine roots; common fine and very fine tubular pores; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

C—38 to 60 inches; light gray (10YR 7/2) silt, dark grayish brown (10YR 4/2) moist; strong medium and thin platy structure; slightly hard, firm, slightly sticky and slightly plastic; violently effervescent; moderately alkaline (pH 8.4).

Typical Pedon Location

Map unit in which located: Greenleaf silt loam, 0 to 2 percent slopes
Location in survey area: About 0.5 mile north of Weiser; 10 feet south and 1,520 feet west of the northeast corner of sec. 30, T. 11 N., R. 5 W.

Range in Characteristics

Profile:
Depth to laminated sediment—16 to 40 inches

Bt horizon:
Clay content—22 to 28 percent

Bk horizon:
Calcium carbonate equivalent—25 to 30 percent

Gross Series

Taxonomic class: Fine-loamy, mixed, frigid Calcic Pachic Argixerolls

Setting

Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderately slow
Landform: Mountains
Parent material: Kind—residuum; source—basalt
Slope range: 30 to 65 percent
Elevation: 2,400 to 4,000 feet
Climatic data (average annual):
Precipitation—12 to 16 inches
Air temperature—42 to 45 degrees F
Frost-free period—120 to 130 days

Typical Pedon Description

A—0 to 10 inches; dark grayish brown (10YR 4/2) loam, very dark brown (10YR 2/2) moist; moderate fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular and tubular pores; slightly acid (pH 6.6); clear smooth boundary.

BAt—10 to 18 inches; dark grayish brown (10YR 4/2) loam, very dark brown (10YR 2/2) moist; weak medium and fine subangular blocky structure; slightly hard, very friable, sticky and plastic; many very fine roots; many very fine tubular pores; few faint clay films on horizontal peds; neutral (pH 6.8); clear wavy boundary.

Bt1—18 to 30 inches; dark brown (10YR 4/3) loam, very dark brown (10YR 2/2) moist; weak medium prismatic structure parting to moderate coarse subangular blocky; slightly hard, firm, very sticky and plastic; common very fine roots; common very fine tubular pores; common faint clay films; slightly acid (pH 6.6); clear wavy boundary.

Bt2—30 to 38 inches; dark brown (10YR 4/3) cobbly clay loam, dark brown (10YR 3/3) moist; moderate medium and coarse subangular blocky structure; hard, firm, very sticky and plastic; common very fine roots; common very fine tubular pores; many distinct clay films on faces of peds and in pores; slightly effervescent; neutral (pH 6.8); abrupt wavy boundary.

R—38 inches; basalt; slightly effervescent in cracks.

Typical Pedon Location

Map unit in which located: Gross loam, 30 to 65 percent slopes

Location in survey area: About 4 miles southeast of Paddock Reservoir; 1,000 feet east and 1,700 feet south of the northwest corner of sec. 31, T. 10 N., R. 1 W.

Range in Characteristics

Profile:
Depth to bedrock—20 to 40 inches

A horizon:
Value—2 or 3 dry, 1 or 2 moist
Chroma—1 or 2 dry or moist

Bt horizon:
Hue—10YR or 7.5YR
Value—4 or 5 dry, 3 or 4 moist
Chroma—2 or 3 dry or moist
Texture—loam, clay loam, or cobbly clay loam

Gwin Series

Taxonomic class: Loamy-skeletal, mixed, mesic Lithic Argixerolls

Setting

Depth class: Shallow
Drainage class: Well drained
Permeability: Moderately slow
Landform: Mountains and canyons
Parent material: Kind—colluvium and residuum; source—basalt
Slope range: 10 to 65 percent
Elevation: 1,900 to 4,500 feet
Climatic data (average annual):
Precipitation—16 to 20 inches
Air temperature—45 to 48 degrees F
Frost-free period—120 to 140 days

Typical Pedon Description

A—0 to 5 inches; brown (7.5YR 5/3) very stony loam, dark brown (7.5YR 3/3) moist; weak fine subangular blocky structure parting to moderate medium granular; slightly hard, very friable, slightly sticky and slightly plastic; many fine roots; many fine irregular pores; 20 percent pebbles, 15 percent cobbles, and 10 percent stones; neutral (pH 6.8); clear smooth boundary.

Bt1—5 to 12 inches; brown (7.5YR 4/3) extremely cobbly loam, dark brown (7.5YR 3/3) moist; moderate medium and fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many fine roots; many fine tubular pores; 40 percent pebbles and 30 percent cobbles; few distinct clay films on faces of peds; neutral (pH 6.8); clear smooth boundary.

Bt2—12 to 20 inches; brown (7.5YR 5/3) extremely cobbly clay loam, brown (7.5YR 4/4) moist; massive; very hard, very firm, slightly sticky and slightly plastic; few fine roots; few fine tubular pores; 45 percent pebbles and 40 percent cobbles; few faint clay films on faces of peds; neutral (pH 6.8); abrupt wavy boundary.

R—20 inches; fractured basalt.

Typical Pedon Location

Map unit in which located: Starveout-Gwin-McDaniel association, 3 to 45 percent slopes

Location in survey area: About 3 miles northeast of Oxbow Dam; 1,660 feet north and 860 feet west of the southeast corner of sec. 3, T. 19 N., R. 4 W.

Range in Characteristics

Profile:
Depth to bedrock—10 to 20 inches

A horizon:
Hue—10YR or 7.5YR
Value—4 or 5 dry, 2 or 3 moist

Bt horizon:
Hue—10YR or 7.5YR
Value—3 or 4 moist
Chroma—2 to 4 dry or moist
Rock fragment content—50 to 85 percent

Harpt Series

Taxonomic class: Fine-loamy, mixed, mesic Torrifluventic Haploxerolls

Setting

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Landform: Alluvial fans
Parent material: Kind—alluvium; source—mixed
Slope range: 2 to 8 percent
Elevation: 2,200 to 2,500 feet
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 52 degrees F
Frost-free period—150 to 155 days

Typical Pedon Description

A—0 to 5 inches; grayish brown (10YR 5/2) loam, very dark grayish brown (10YR 3/2) moist; weak medium granular structure; slightly hard, friable; slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; slightly acid (pH 6.4); abrupt smooth boundary.

C1—5 to 23 inches; grayish brown (10YR 5/2) loam, very dark grayish brown (10YR 3/2) moist; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; many very fine irregular pores; neutral (pH 6.8); gradual smooth boundary.

C2—23 to 40 inches; brown (10YR 5/3) loam, dark brown (10YR 3/3) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; common fine roots; many very fine irregular pores; neutral (pH 7.2); abrupt smooth boundary.

2C3—40 to 60 inches; very pale brown (10YR 7/3) coarse sandy loam, brown (10YR 5/3) moist; massive; slightly hard, friable, nonsticky and nonplastic; few fine roots; many fine irregular pores; neutral (pH 6.8).

Typical Pedon Location

Map unit in which located: Harpt loam, 2 to 4 percent slopes
Location in survey area: About 6 miles southeast of Weiser; 600 feet south and 80 feet west of the northeast corner of sec. 20, T. 10 N., R. 4 W.

Range in Characteristics

Profile:
Content of organic matter—less than 1 percent below a depth of 15 inches
Ab horizon—present in some pedons

A horizon:
Value—4 or 5 dry, 2 or 3 moist
Chroma—2 or 3 dry or moist

C horizon:
Hue—2.5Y or 10YR

Haw Series

Taxonomic class: Fine-loamy, mixed, mesic Aridic Calcic Argixerolls

Setting

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Landform: Lacustrine terraces
Parent material: Kind—alluvium; source—mixed
Slope range: 2 to 65 percent
Elevation: 2,300 to 3,500 feet
Climatic data (average annual):
Precipitation—12 to 13 inches
Air temperature—48 to 51 degrees F
Frost-free period—120 to 155 days

Typical Pedon Description

Ap—0 to 8 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic, many very fine roots; many very fine irregular pores; neutral (pH 6.8); abrupt smooth boundary.

AB—8 to 13 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; many very fine

tubular pores; slightly acid (pH 6.5); clear wavy boundary.

BAt—13 to 17 inches; grayish brown (10YR 5/2) silt loam, dark brown (10YR 3/3) moist; weak medium prismatic structure parting to moderate medium subangular blocky; hard, firm, slightly sticky and slightly plastic; few very fine roots; many very fine tubular pores; layer of light gray (10YR 7/2) bleached silt grains on upper part of peds; few faint clay films on lower part of peds; neutral (pH 6.8); clear wavy boundary.

Bt—17 to 26 inches; brown (10YR 5/3) clay loam, dark brown (10YR 3/3) moist; moderate fine prismatic structure parting to moderate coarse subangular blocky; very hard, very firm, sticky and plastic; few very fine roots; common very fine tubular pores; many distinct clay films on faces of peds; neutral (pH 7.0); clear wavy boundary.

Bk—26 to 38 inches; pale brown (10YR 6/3) clay loam, brown (10YR 4/3) moist; massive; hard, firm, sticky and plastic; strongly effervescent, few spots of calcium carbonates; mildly alkaline (pH 7.8); gradual wavy boundary.

C—38 to 60 inches; very pale brown (10YR 7/4) coarse sandy loam, light yellowish brown (10YR 6/4) moist; massive; slightly hard, friable, slightly sticky and nonplastic; slightly effervescent; mildly alkaline (pH 7.8).

Typical Pedon Location

Map unit in which located: Haw silt loam, 8 to 12 percent slopes

Location in survey area: About 6 miles southeast of Weiser; 2,640 feet north and 2,140 feet east of the southwest corner of sec. 21, T. 10 N., R. 4 W.

Range in Characteristics

Profile:

Thickness of mollic epipedon—11 to 17 inches

Content of organic matter—less than 1 percent below a depth of 17 inches

Depth to calcium carbonates—23 to 38 inches

Bt horizon:

Value—5 or 6 dry, 3 to 5 moist

Chroma—2 to 4 dry or moist

Texture—clay loam or sandy clay loam

Jacknife Series

Taxonomic class: Fine, montmorillonitic, mesic Pachic Argixerolls

Setting

Depth class: Very deep

Drainage class: Well drained

Permeability: Slow

Landform: Fan terraces and mountains

Parent material: Kind—alluvium and colluvium; source—basalt

Slope range: 1 to 30 percent

Elevation: 3,100 to 4,500 feet

Climatic data (average annual):

Precipitation—18 to 22 inches

Air temperature—45 to 50 degrees F

Frost-free period—110 to 140 days

Typical Pedon Description

A1—0 to 5 inches; dark gray (10YR 4/1) loam, black (10YR 2/1) moist; weak fine granular structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine and fine irregular pores; neutral (pH 6.9); abrupt smooth boundary.

A2—5 to 13 inches; dark grayish brown (10YR 4/2) loam, very dark brown (10YR 2/2) moist; weak fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine roots; many very fine and fine tubular pores; neutral (pH 6.9); abrupt smooth boundary.

BAt—13 to 23 inches; brown (10YR 5/3) clay loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; hard, friable, sticky and plastic; common very fine and fine roots; common very fine and fine tubular pores; many distinct clay films on faces of peds and in pores; neutral (pH 7.0); clear smooth boundary.

Bt—23 to 41 inches; brown (7.5YR 5/4) clay, dark reddish brown (5YR 3/3) moist; moderate medium prismatic structure; hard, firm, sticky and plastic; few very fine and fine roots; few very fine tubular pores; many distinct clay films on faces of peds and in pores; neutral (pH 7.0); clear smooth boundary.

C—41 to 60 inches; brown (7.5YR 5/4) cobbly clay loam, dark brown (7.5YR 4/4) moist; weak medium subangular blocky structure; hard, firm, sticky and plastic; few fine roots; few very fine tubular pores; 20 percent pebbles and 15 percent cobbles; common faint clay films on faces of peds; neutral (pH 7.1).

Typical Pedon Location

Map unit in which located: Jacknife loam, 12 to 30 percent slopes
Location in survey area: About 10 miles east of Crane Creek Reservoir; 1,000 feet south and 1,200 feet east of the northwest corner of sec. 33, T. 12 N., R. 1 E.

Range in Characteristics

A horizon:
Value—3 or 4 dry, 1 or 2 moist
Chroma—1 or 2 dry or moist

Bt horizon:
Hue—10YR or 7.5YR
Chroma—2 or 3 dry or moist
Texture—clay loam, silty clay loam, clay, cobbly clay loam, or cobbly clay
Rock fragment content—0 to 30 percent

Jenny Series

Taxonomic class: Fine, montmorillonitic, mesic Typic Chromoxererts

Setting

Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Landform: Stream terraces
Parent material: Kind—alluvium; source—mixed
Slope range: 0 to 2 percent
Elevation: 2,100 to 2,300 feet
Climatic data (average annual):
Precipitation—12 to 14 inches
Air temperature—48 to 52 degrees F
Frost-free period—150 to 155 days

Typical Pedon Description

A—0 to 3 inches; grayish brown (10YR 5/2) clay, very dark grayish brown (10YR 3/2) moist; strong medium and coarse granular structure; very hard, firm, sticky and very plastic; few very fine roots; many fine irregular pores; cracks 2 inches wide; neutral (pH 6.8); abrupt smooth boundary.
Bw—3 to 15 inches; grayish brown (10YR 5/2) clay, very dark grayish brown (10YR 3/2) moist; strong coarse prismatic structure; very hard, firm, sticky and very plastic; few very fine roots; many very fine tubular pores; cracks 2 inches wide; neutral (pH 6.8); clear wavy boundary.
Bss—15 to 29 inches; grayish brown (10YR 5/2) clay, very dark grayish brown (10YR 3/2) moist; black (10YR 2/1) coatings on faces of peds; strong coarse prismatic structure parting to strong coarse subangular blocky; very hard, firm, sticky and very plastic; few very fine roots; many very fine tubular pores; many continuous pressure faces and many intersecting wedge-shaped slickensides; cracks 1.5 inches wide; neutral (pH 6.8); gradual wavy boundary.
BC—29 to 38 inches; grayish brown (10YR 5/2) clay, very dark brown (10YR 2/2) moist; strong coarse subangular blocky structure; hard, friable, sticky and very plastic; few very fine roots; many very fine tubular pores; cracks 0.5 inch wide; neutral (pH 6.8); clear wavy boundary.
C1—38 to 49 inches; brown (10YR 5/3) silt loam, dark brown (10YR 3/3) moist; weak coarse subangular blocky structure; slightly hard, very friable, slightly sticky and plastic; many very fine tubular pores; moderately alkaline (pH 7.9); abrupt smooth boundary.
C2—49 to 60 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; few fine prominent dark yellowish brown (10YR 3/6) mottles; massive; slightly hard, very friable, slightly sticky and plastic; many very fine tubular pores; slightly effervescent in lower part; moderately alkaline (pH 7.9).

Typical Pedon Location

Map unit in which located: Jenny clay, 0 to 2 percent slopes
Location in survey area: About 5 miles northwest of Weiser; about 2,600 feet south and 1,000 feet east of the northwest corner of sec. 23, T. 11 N., R. 6 W.

Range in Characteristics

Profile:
Depth to calcium carbonates—50 to 60 inches
Depth to loamy material—35 to 50 inches

Johnson Series

Taxonomic class: Fine-loamy, mixed, frigid Ultic Argixerolls

Setting

Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Landform: Mountains

Parent material: Kind—residuum; source—granite
Slope range: 30 to 65 percent
Elevation: 3,700 to 3,900 feet
Climatic data (average annual):
Precipitation—22 to 26 inches
Air temperature—43 to 45 degrees F
Frost-free period—90 to 110 days

Typical Pedon Description

Oi—1 inch to 0; twigs, leaves, and needles.
A1—0 to 7 inches; grayish brown (10YR 5/2) coarse sandy loam, very dark brown (10YR 2/2) moist; strong fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine roots and few coarse roots; many very fine irregular pores; moderately acid (pH 6.0); abrupt smooth boundary.
A2—7 to 20 inches; brown (10YR 5/3) coarse sandy loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure parting to strong fine granular; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots and few coarse roots; many very fine irregular pores; slightly acid (pH 6.2); clear smooth boundary.
Bt1—20 to 30 inches; yellowish brown (10YR 5/4) clay loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure parting to strong medium granular; slightly hard, friable, sticky and plastic; common very fine roots and few coarse roots; many very fine tubular pores; few faint clay films on faces of peds; slightly acid (pH 6.2); clear wavy boundary.
Bt2—30 to 42 inches; yellowish brown (10YR 5/4) clay loam, dark yellowish brown (10YR 4/4) moist; weak coarse subangular blocky structure parting to strong medium granular; slightly hard, friable, sticky and plastic; few fine roots; many fine tubular pores; common faint clay films on faces of peds; slightly acid (pH 6.4); clear wavy boundary.
Cr—42 inches; weathered granite.

Typical Pedon Location

Map unit in which located: Johnson coarse sandy loam, 30 to 65 percent slopes
Location in survey area: About 12 miles northwest of Cambridge; 1,250 feet south and 500 feet west of the northeast corner of sec. 28, T. 18 N., R. 2 W.

Range in Characteristics

Profile:
Thickness of mollic epipedon—10 to 20 inches
Depth to paralithic contact—40 to 60 inches

A horizon:
Value—3 to 5 dry
Chroma—2 or 3 dry or moist
Base saturation—50 to 75 percent

Bt horizon:
Hue—10YR or 7.5YR
Value—4 or 5 dry, 3 or 4 moist
Chroma—4 or 5 dry or moist

Jughandle Series

Taxonomic class: Coarse-loamy, mixed Vitrandic Cryochrepts

Setting

Depth class: Deep
Drainage class: Somewhat excessively drained
Permeability: Moderately rapid
Landform: Mountains
Parent material: Kind—residuum; source—granite
Slope range: 30 to 90 percent
Elevation: 4,000 to 5,200 feet
Climatic data (average annual):
Precipitation—30 to 38 inches
Air temperature—36 to 42 degrees F
Frost-free period—30 to 70 days

Typical Pedon Description

Oi—3 to 2 inches; needles, twigs, leaves, and cones.
Oe—2 inches to 0; partially decomposed needles, twigs, leaves, and cones.
Bs1—0 to 5 inches; yellowish brown (10YR 5/4) sandy loam, dark brown (10YR 3/3) moist; weak very fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine roots and few medium and coarse roots; many very fine irregular pores; slightly acid (pH 6.4); clear smooth boundary.
Bs2—5 to 13 inches; light yellowish brown (10YR 6/4) sandy loam, dark yellowish brown (10YR 3/4) moist; weak very fine granular structure; soft, very friable, slightly sticky and nonplastic; many very fine roots and few coarse roots; many very fine irregular pores; slightly acid (pH 6.4); clear irregular boundary.
C1—13 to 29 inches; pale brown (10YR 6/3) coarse sandy loam, brown (10YR 4/3) moist; massive; soft, very friable, slightly sticky and nonplastic; common very fine and fine roots; many very fine tubular pores; spots of Bs horizon material;

moderately micaceous; slightly acid (pH 6.4); clear wavy boundary.
C2—29 to 48 inches; very pale brown (10YR 8/4) fine gravelly loamy coarse sand, light yellowish brown (10YR 6/4) moist; massive; soft, friable, nonsticky and nonplastic; few medium and coarse roots; many very fine irregular pores; moderately micaceous; 15 percent fine pebbles; few 10-millimeter-thick clay lamellae; slightly acid (pH 6.4); gradual irregular boundary.
Cr—48 inches; weathered granite.

Typical Pedon Location

Map unit in which located: Jughandle sandy loam, 30 to 60 percent slopes
Location in survey area: About 6 miles northwest of New Meadows; 1,550 feet north and 1,030 feet east of the southwest corner of sec. 27, T. 20 N., R. 1 E.

Range in Characteristics

Profile:
Depth to paralithic contact—40 to 60 inches

Bs horizon:
Hue—10YR or 7.5YR

C horizon:
Value—6 to 8 dry, 4 to 6 moist
Chroma—3 or 4 dry or moist

Kangas Series

Taxonomic class: Sandy, mixed Entic Cryumbrepts

Setting

Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability: Rapid
Landform: Fan terraces
Parent material: Kind—glacial outwash; source—granite
Slope range: 0 to 2 percent
Elevation: 3,800 to 3,900 feet
Climatic data (average annual):
Precipitation—22 to 24 inches
Air temperature—38 to 40 degrees F
Frost-free period—60 to 80 days

Typical Pedon Description

A1—0 to 21 inches; brown (10YR 5/3) coarse sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine roots; many very fine irregular pores; slightly acid (pH 6.4); clear smooth boundary.
C1—21 to 40 inches; pale brown (10YR 6/3) fine gravelly loamy coarse sand, dark brown (10YR 4/3) moist; massive; loose, nonsticky and nonplastic; common very fine roots; 20 percent fine pebbles; slightly acid (pH 6.4); gradual smooth boundary.
C2—40 to 60 inches; brownish yellow (10YR 6/3) very gravelly coarse sand, yellowish brown (10YR 5/6) moist; single grain; loose, nonsticky and nonplastic; 35 percent pebbles; slightly acid (pH 6.2).

Typical Pedon Location

Map unit in which located: Kangas coarse sandy loam, 0 to 2 percent slopes
Location in survey area: About 2.5 miles southeast of New Meadows; 2,600 feet north and 1,300 feet west of the southeast corner of sec. 29, T. 19 N., R. 2 E.

Range in Characteristics

A horizon:
Value—2 or 3 moist
Chroma—2 or 3 dry, 1 or 2 moist

C horizon:
Value—4 to 7 dry, 3 to 6 moist
Chroma—3 or 4 dry, 2 to 6 moist
Rock fragment content—20 to 35 percent

Klicker Series

Taxonomic class: Loamy-skeletal, mixed, frigid Ultic Argixerolls

Setting

Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderately slow
Landform: Mountains
Parent material: Kind—alluvium and colluvium; source—basalt
Slope range: 30 to 60 percent
Elevation: 3,500 to 4,800 feet
Climatic data (average annual):
Precipitation—26 to 30 inches
Air temperature—43 to 45 degrees F
Frost-free period—70 to 90 days

Typical Pedon Description

Oi—1 inch to 0; partially decomposed leaves, needles, cones, twigs, and grass.
A—0 to 8 inches; dark grayish brown (10YR 4/2) stony loam, very dark brown (10YR 2/2) moist; moderate coarse granular structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; common fine irregular pores; 5 percent cobbles and 10 percent stones; slightly acid (pH 6.2); clear wavy boundary.
AB—8 to 17 inches; dark grayish brown (10YR 4/2) stony loam, very dark grayish brown (10YR 3/2) moist; moderate coarse subangular blocky structure parting to moderate coarse granular; hard, friable, slightly sticky and slightly plastic; common very fine and fine roots and few medium and coarse roots; common fine irregular pores; 5 percent cobbles and 10 percent stones; slightly acid (pH 6.4); clear wavy boundary.
Bt1—17 to 25 inches; brown (7.5YR 5/4) very cobbly clay loam, dark brown (7.5YR 3/4) moist; moderate coarse subangular blocky structure; hard, firm, sticky and plastic; few medium roots; common fine irregular pores; 20 percent pebbles and 20 percent cobbles; many distinct clay films on faces of peds; slightly acid (pH 6.5); gradual wavy boundary.
Bt2—25 to 34 inches; brown (7.5YR 5/4) very cobbly clay loam, dark brown (7.5YR 4/4) moist; moderate fine subangular blocky structure; hard, friable, sticky and plastic; common very fine roots and few medium roots; common fine irregular pores; 20 percent pebbles and 30 percent cobbles; many distinct clay films on faces of peds and in pores; slightly acid (pH 6.5); abrupt wavy boundary.
R—34 inches; basalt.

Typical Pedon Location

Map unit in which located: Klicker stony loam, 30 to 60 percent slopes
Location in survey area: About 8 miles north of Cambridge; 1,360 feet south and 2,150 feet east of the northwest corner of sec. 32, T. 16 N., R. 3 W.

Range in Characteristics

Profile:
Depth to bedrock—20 to 40 inches

A horizon:
Value—4 or 5 dry, 2 or 3 moist
Chroma—2 or 3 dry or moist

Bt horizon:
Hue—10YR or 7.5YR
Value—4 or 5 dry, 3 or 4 moist
Chroma—2 to 4 dry or moist
Texture—very cobbly clay loam or very cobbly silty clay loam
Rock fragment content—35 to 50 percent
Clay content—27 to 35 percent

Klickson Series

Taxonomic class: Loamy-skeletal, mixed, frigid Ultic Argixerolls

Setting

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Landform: Mountains
Parent material: Kind—residuum and colluvium; source—basalt
Slope range: 30 to 90 percent
Elevation: 3,400 to 4,600 feet
Climatic data (average annual):
Precipitation—28 to 32 inches
Air temperature—42 to 45 degrees F
Frost-free period—70 to 90 days

Typical Pedon Description

Oa—1 inch to 0; decomposed litter.
A—0 to 8 inches; dark grayish brown (10YR 4/2) silt loam, very dark brown (10YR 2/2) moist; strong medium and coarse granular structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and fine roots and few medium and coarse roots; many very fine irregular pores; 1 percent pebbles; neutral (pH 6.6); clear wavy boundary.
AB—8 to 17 inches; brown (10YR 5/3) cobbly silt loam, dark brown (7.5YR 3/2) moist; moderate very fine and fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots and few medium roots; many very fine and fine tubular pores; 15 percent cobbles; neutral (pH 6.8); gradual wavy boundary.
BA—17 to 20 inches; brown (10YR 4/3) very cobbly loam, dark brown (7.5YR 3/2) moist; moderate fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common medium roots; many very fine tubular pores; 20 percent pebbles, 30 percent cobbles, and 5 percent stones; neutral (pH 6.8); gradual wavy boundary.
Bt—20 to 50 inches; brown (7.5YR 5/4) very cobbly loam, dark brown (7.5YR 3/4) moist; moderate fine and medium subangular blocky structure; hard, friable, sticky and plastic; common medium roots; many very fine and fine tubular pores; 20 percent

pebbles, 30 percent cobbles, and 5 percent stones; few faint clay films on faces of peds; neutral (pH 6.8); gradual wavy boundary.

2Btb—50 to 60 inches; brown (7.5YR 5/3) very cobbly clay, dark brown (7.5YR 4/3) moist; moderate coarse subangular blocky structure; very hard, firm, sticky and plastic; few medium roots; common fine tubular pores; 5 percent pebbles, 30 percent cobbles, and 5 percent stones; common distinct clay films on all surfaces; neutral (pH 7.0).

Typical Pedon Location

Map unit in which located: Klickson-Rock outcrop complex, 40 to 90 percent slopes

Location in survey area: About 4 miles southeast of Pinehurst; 2,100 feet east and 350 feet north of the southwest corner of sec. 34, T. 22 N., R. 1 E.

Range in Characteristics

Profile:
Thickness of mollic epipedon—10 to 20 inches
2Btb horizon—absent in some pedons
Base saturation (upper 30 inches)—less than 75 percent

A horizon:
Hue—10YR or 7.5YR

Bt horizon:
Rock fragment content—35 to 60 percent
Thickness of mollic epipedon—10 to 20 inches

Langrell Series

Taxonomic class: Loamy-skeletal, mixed, mesic Pachic Haploxerolls

Setting

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Landform: Stream terraces
Parent material: Kind—alluvium; source—mixed
Slope range: 0 to 3 percent
Elevation: 2,500 to 3,400 feet
Climatic data (average annual):
Precipitation—14 to 22 inches
Air temperature—47 to 51 degrees F
Frost-free period—110 to 160 days

Typical Pedon Description

A—0 to 10 inches; dark grayish brown (10YR 4/2) gravelly loam, very dark brown (10YR 2/2) moist; weak very fine granular structure; loose, friable, nonsticky and nonplastic; many very fine roots; many very fine irregular pores; 15 percent pebbles; neutral (pH 6.6); clear smooth boundary.

Bw1—10 to 24 inches; grayish brown (10YR 5/2) gravelly loam, very dark grayish brown (10YR 3/2) moist; common medium subangular blocky structure; slightly hard, friable, slightly sticky and nonplastic; many very fine roots; few fine tubular pores; 20 percent pebbles; neutral (pH 6.8); clear smooth boundary.

2Bw2—24 to 30 inches; grayish brown (10YR 5/2) extremely cobbly loam, very dark grayish brown (10YR 3/2) moist; common medium and fine subangular blocky structure; slightly hard, firm, slightly sticky and slightly plastic; few fine roots; few fine tubular pores; 50 percent pebbles and 30 percent cobbles, mostly basalt; neutral (pH 6.8); gradual smooth boundary.

3C—30 to 60 inches; brown (10YR 5/3) extremely cobbly sandy loam, dark brown (10YR 3/3) moist; massive; soft, very friable, nonsticky and nonplastic; few fine roots; many very fine irregular pores; 50 percent pebbles and 30 percent cobbles, mostly basalt; neutral (pH 7.0).

Typical Pedon Location

Map unit in which located: Langrell gravelly loam, 0 to 3 percent slopes

Location in survey area: About 6 miles northwest of Weiser; 2,090 feet south and 2,330 feet west of the northeast corner of sec. 33, T. 12 N., R. 6 W.

Range in Characteristics

A horizon:
Value—4 or 5 dry, 2 or 3 moist
Chroma—2 or 3 dry or moist
Rock fragment content—5 to 20 percent

Bw and C horizons:
Hue—10YR or 7.5YR
Value—4 or 5 dry, 3 or 4 moist
Rock fragment content—15 to 90 percent

Lankbush Series

Taxonomic class: Fine-loamy, mixed, mesic Xerollic Haplargids

Setting

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Landform: Foothills and lacustrine terraces
Parent material: Kind—alluvium; source—mixed
Slope range: 2 to 60 percent
Elevation: 2,200 to 3,500 feet

Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 52 degrees F
Frost-free period—120 to 155 days

Typical Pedon Description

A—0 to 12 inches; light brownish gray (10YR 6/2) sandy loam, very dark grayish brown (10YR 3/3) moist; weak very fine granular structure; soft, very friable, nonsticky and nonplastic; many fine and very fine roots; many very fine irregular pores; neutral (pH 7.0); abrupt smooth boundary.

Bt1—12 to 18 inches; light yellowish brown (10YR 6/4) sandy clay loam, dark yellowish brown (10YR 3/4) moist; weak medium prismatic structure parting to moderate fine and medium subangular blocky; slightly hard, friable, slightly sticky and slightly plastic; many fine and very fine roots; common fine and very fine tubular pores; few faint clay films on vertical and horizontal faces of peds; moderately alkaline (pH 7.9); clear smooth boundary.

Bt2—18 to 30 inches; light yellowish brown (10YR 6/4) sandy clay loam, dark yellowish brown (10YR 4/4) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and plastic; common fine and very fine roots; common fine and very fine tubular pores; few faint clay films on horizontal faces of peds; moderately alkaline (pH 7.9); clear smooth boundary.

BCt—30 to 43 inches; light yellowish brown (10YR 6/4) sandy clay loam, yellowish brown (10YR 5/4) moist; weak medium subangular blocky structure; slightly hard, firm, slightly sticky and slightly plastic; common very fine roots; many fine and very fine tubular pores; few faint clay films on faces of peds; moderately alkaline (pH 7.9); clear smooth boundary.

2C—43 to 60 inches; light yellowish brown (10YR 6/4) sand, yellowish brown (10YR 5/6) moist; single grain; loose, nonsticky and nonplastic; many fine and very fine irregular pores; moderately alkaline (pH 7.9).

Typical Pedon Location

Map unit in which located: Lankbush sandy loam, 12 to 30 percent slopes

Location in survey area: About 0.1 mile north of Weiser; 2,350 feet east and 1,360 feet south of the northwest corner of sec. 29, T. 11 N., R. 5 W.

Range in Characteristics

A horizon:
Hue—2.5Y or 10YR
Value—5 or 6 dry, 3 or 4 moist
Chroma—2 to 4 dry or moist

Bt horizon:
Texture—sandy clay loam, clay loam, or loam
Clay content—20 to 30 percent

Lanktree Series

Taxonomic class: Fine, montmorillonitic, mesic Xerollic Haplargids

Setting

Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Landform: Lacustrine and fan terraces
Parent material: Kind—alluvium; source—mixed
Slope range: 0 to 60 percent
Elevation: 2,200 to 3,500 feet
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 52 degrees F
Frost-free period—140 to 150 days

Typical Pedon Description

Ap—0 to 10 inches; gray (10YR 6/1) loam, dark grayish brown (10YR 4/2) moist; weak very fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; mildly alkaline (pH 7.8); abrupt smooth boundary.

BA—10 to 16 inches; pale brown (10YR 6/3) clay loam, dark brown (10YR 4/3) moist; moderate fine subangular blocky structure; hard, firm, sticky and plastic; common very fine roots; common very fine tubular pores; mildly alkaline (pH 7.8); abrupt smooth boundary.

Bt—16 to 26 inches; pale brown (10YR 6/3) clay loam, dark brown (10YR 4/3) moist; moderate medium prismatic structure parting to moderate fine subangular blocky; hard, firm, very sticky and very plastic; few very fine roots; common very fine tubular pores; common distinct clay films on vertical faces of peds; mildly alkaline (pH 7.8); clear smooth boundary.

Bk—26 to 33 inches; pale brown (10YR 6/3) loam, dark

brown (10YR 4/3) moist; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; common very fine tubular pores; few faint clay films on faces of peds; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

C—33 to 60 inches; pale brown (10YR 6/3) loam, dark brown (10YR 4/3) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; few fine roots; common very fine tubular pores; strongly effervescent; moderately alkaline (pH 8.4).

Typical Pedon Location

Map unit in which located: Lanktree loam, 0 to 2 percent slopes

Location in survey area: About 10 miles east of Weiser; 2,060 feet east and 2,150 feet south of the northwest corner of sec. 11, T. 10 N., R. 4 W.

Range in Characteristics

Profile:
Depth to calcium carbonates—25 to 30 inches

Bt horizon:
Texture—clay loam, sandy clay, or clay
Clay content—35 to 45 percent

Ligget Series

Taxonomic class: Coarse-loamy, mixed Alfic Cryochrepts

Setting

Depth class: Deep
Drainage class: Well drained
Permeability: Moderately rapid
Landform: Mountains
Parent material: Kind—residuum; source—granite
Slope range: 5 to 60 percent
Elevation: 4,000 to 5,700 feet
Climatic data (average annual):
Precipitation—28 to 32 inches
Air temperature—36 to 42 degrees F
Frost-free period—60 to 80 days

Typical Pedon Description

Oi—3 inches to 0; slightly decomposed needles, leaves, twigs, and cones.

A—0 to 4 inches; brown (10YR 5/3) sandy loam, very dark grayish brown (10YR 3/2) moist; weak very fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine roots; many very fine irregular pores; slightly acid (pH 6.2); abrupt smooth boundary.

AB—4 to 6 inches; pale brown (10YR 6/3) sandy loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure parting to weak very fine granular; soft, very friable, nonsticky and nonplastic; many very fine roots; many very fine irregular pores; slightly acid (pH 6.4); clear smooth boundary.

Bw1—6 to 14 inches; light yellowish brown (10YR 6/4) sandy loam, dark yellowish brown (10YR 3/4) moist; weak medium subangular blocky structure parting to weak very fine granular; slightly hard, very friable, nonsticky and nonplastic; common very fine roots and few medium and coarse roots; many very fine irregular pores; one 2-millimeter-thick lamella; slightly acid (pH 6.4); clear smooth boundary.

Bw2—14 to 46 inches; yellowish brown (10YR 5/4) sandy loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; hard, firm, nonsticky and nonplastic; few very fine, medium, and coarse roots; few fine tubular pores; two 2-millimeter-thick lamellae; slightly acid (pH 6.2); clear smooth boundary.

BC—46 to 54 inches; yellowish brown (10YR 5/4) loamy sand, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; hard, firm, nonsticky and nonplastic; few coarse roots; few fine tubular pores; slightly acid (pH 6.2); clear wavy boundary.

Cr—54 inches; weathered granite.

Typical Pedon Location

Map unit in which located: Ligget sandy loam, 30 to 60 percent slopes

Location in survey area: About 6 miles northwest of New Meadows; 1,750 feet north and 2,350 feet west of the southeast corner of sec. 27, T. 20 N., R. 1 E.

Range in Characteristics

Profile:
Depth to paralithic contact—40 to 60 inches

A horizon:
Value—5 or 6 dry, 3 or 4 moist
Chroma—2 or 3 dry or moist

Littlesalmon Series

Taxonomic class: Sandy-skeletal, mixed Andic Cryochrepts

Setting

Depth class: Deep
Drainage class: Somewhat excessively drained
Permeability: Rapid
Landform: Mountains
Parent material: Kind—residuum; source—volcanic ash over schist, gneiss, and granite
Slope range: 30 to 75 percent
Elevation: 3,800 to 5,400 feet
Climatic data (average annual):
Precipitation—30 to 40 inches
Air temperature—38 to 44 degrees F
Frost-free period—60 to 80 days

Typical Pedon Description

Oi—3 inches to 1 inch; slightly decomposed cones, twigs, needles, and leaves.
Oa—1 inch to 0; highly decomposed cones, twigs, needles, and leaves.
A1—0 to 4 inches; grayish brown (10YR 5/2) loam, very dark grayish brown (10YR 3/2) moist; weak very fine granular structure; soft, very friable, nonsticky and slightly plastic; many very fine roots; many very fine irregular pores; slightly acid (pH 6.4); clear smooth boundary.
A2—4 to 13 inches; brown (10YR 5/3) loam, dark brown (10YR 3/4) moist; moderate fine and medium subangular blocky structure; soft, very friable, nonsticky and slightly plastic; many very fine roots; many very fine irregular pores; 1 percent pebbles; slightly acid (pH 6.2); clear wavy boundary.
2Bw—13 to 20 inches; pale brown (10YR 6/3) cobbly sandy loam, brown (10YR 5/3) moist; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and slightly plastic; common very fine roots and few coarse roots; many fine tubular pores; 15 percent pebbles and 15 percent cobbles; moderately acid (pH 6.0); clear smooth boundary.
2BC—20 to 28 inches; pale brown (10YR 6/3) very cobbly loamy coarse sand, brown (10YR 5/3) moist; massive; loose, nonsticky and nonplastic; common very fine roots; many medium irregular pores; 20 percent pebbles and 30 percent cobbles; neutral (pH 6.6); abrupt wavy boundary.
2C1—28 to 40 inches; grayish brown (10YR 5/2) and light gray (10YR 7/2) extremely cobbly loamy coarse sand, dark grayish brown (10YR 4/2) and light brownish gray (10YR 6/2) moist; massive; loose, nonsticky and nonplastic; common very fine roots and few coarse roots; many medium irregular pores; 15 percent pebbles and 75 percent cobbles; slightly acid (pH 6.2); clear wavy boundary.
2C2—40 to 60 inches; grayish brown (10YR 5/2) and very pale brown (10YR 8/3) extremely cobbly loamy coarse sand, dark grayish brown (10YR 4/2) and brown (10YR 5/3) moist; massive; loose, nonsticky and nonplastic; common very fine roots and few coarse roots; many medium irregular pores; 15 percent pebbles and 75 percent cobbles; slightly acid (pH 6.2); clear wavy boundary.
2Cr—60 inches; weathered granite.

Typical Pedon Location

Map unit in which located: Molly-Littlesalmon-Rock outcrop complex, 60 to 75 percent slopes
Location in survey area: About 15 miles north of New Meadows; 200 feet north and 1,800 feet west of the southeast corner of sec. 15, T. 21 N., R. 2 E.

Range in Characteristics

Profile:
Depth to paralithic contact—40 to 60 inches
Particle-size control section—averages 35 to 80 percent rock fragments
Volcanic ash mantle—less than 14 inches thick

A horizon:
Value—4 or 5 dry, 3 or 4 moist
Chroma—2 to 4 dry or moist

2Bw horizon:
Value—6 or 7 dry, 4 or 5 moist
Chroma—2 or 3 dry or moist
Rock fragment content—15 to 35 percent

2C horizon:
Value—5 to 8 dry, 4 to 6 moist
Chroma—2 or 3 dry or moist
Rock fragment content—40 to 90 percent

Lolalita Series

Taxonomic class: Coarse-loamy, mixed, nonacid, mesic Xeric Torriorthents

Setting

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Landform: Lacustrine terraces
Parent material: Kind—residuum and colluvium; source—granite

Slope range: 4 to 60 percent
Elevation: 2,300 to 3,500 feet
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—48 to 52 degrees F
Frost-free period—120 to 155 days

Typical Pedon Description

A—0 to 4 inches; grayish brown (2.5Y 5/3) sandy loam, dark grayish brown (2.5Y 4/2) moist; weak medium subangular blocky structure parting to single grain; loose, nonsticky and nonplastic; many very fine roots; many very fine irregular pores; neutral (pH 7.0); clear wavy boundary.
C—4 to 38 inches; light yellowish brown (2.5Y 6/4) sandy loam, olive brown (2.5Y 4/3) moist; weak medium subangular blocky structure parting to single grain; loose, nonsticky and nonplastic; many very fine roots; many very fine irregular pores; neutral (pH 7.0); diffuse wavy boundary.
2Ck—38 to 60 inches; white (2.5Y 8/3) sandy loam, light brownish gray (2.5Y 6/3) moist; massive; loose, nonsticky and nonplastic; many very fine irregular pores; slightly effervescent; mildly alkaline (pH 8.0).

Typical Pedon Location

Map unit in which located: Lolalita-Glasgow complex, 30 to 60 percent slopes
Location in survey area: About 7 miles southeast of Weiser; 1,160 feet north and 800 feet east of the southwest corner of sec. 26, T. 11 N., R. 5 W.

Range in Characteristics

Profile:
2Ck horizon—absent in some pedons

A horizon:
Hue—2.5Y or 10YR
Value—5 or 6 dry, 4 or 5 moist
Chroma—2 or 3 dry or moist
Reaction—neutral or slightly acid

C horizon:
Reaction—slightly acid to mildly alkaline

Lorella Series

Taxonomic class: Clayey-skeletal, montmorillonitic, mesic Lithic Argixerolls

Setting

Depth class: Shallow
Drainage class: Well drained
Permeability: Slow
Landform: Mountains and canyons
Parent material: Kind—colluvium and residuum; source—basalt
Slope range: 30 to 65 percent
Elevation: 3,500 to 4,200 feet
Climatic data (average annual):
Precipitation—12 to 16 inches
Air temperature—48 to 50 degrees F
Frost-free period—110 to 125 days

Typical Pedon Description

A—0 to 6 inches; grayish brown (10YR 5/2) very stony clay loam, dark brown (10YR 3/3) moist; moderate fine granular structure; soft, friable, slightly sticky and slightly plastic; many fine and very fine roots; common fine and very fine tubular and irregular pores; 5 percent pebbles and 50 percent stones; neutral (pH 7.2); clear smooth boundary.
Bt1—6 to 10 inches; dark brown (10YR 4/3) very stony clay loam, dark yellowish brown (10YR 3/4) moist; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common fine and very fine roots; many fine and very fine tubular and irregular pores; 5 percent pebbles and 35 percent stones; neutral (pH 7.2); clear smooth boundary.
Bt2—10 to 15 inches; dark yellowish brown (10YR 4/4) very stony clay loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; hard, very friable, very sticky and very plastic; few very fine roots; many fine tubular pores; 10 percent pebbles and 35 percent stones; common distinct clay films on faces of peds and in pores; mildly alkaline (pH 7.4); abrupt wavy boundary.
Bt3—15 to 18 inches; yellowish brown (10YR 5/4) very stony clay, brown (10YR 4/3) moist; massive; very hard, firm, very sticky and very plastic; many fine tubular pores; 10 percent pebbles and 40 percent stones; mildly alkaline (pH 7.4); abrupt wavy boundary.
R—18 inches; basalt.

Typical Pedon Location

Map unit in which located: Lorella-Rock outcrop complex, 50 to 65 percent slopes
Location in survey area: About 11 miles northwest of Weiser; 2,000 feet east and 1,900 feet south of the northwest corner of sec. 12, T. 2 N., R. 7 W.

Range in Characteristics

Profile:
Depth to bedrock—10 to 20 inches
Rock fragment content—35 to 60 percent

A horizon:
Value—4 or 5 dry, 2 or 3 moist
Chroma—2 or 3 dry or moist

Bt horizon:
Value—4 to 6 dry, 3 or 4 moist
Chroma—2 to 4 dry or moist
Texture—very stony clay or very stony clay loam
Clay content—35 to 50 percent

Mackey Series

Taxonomic class: Loamy-skeletal, mixed, mesic Xerollic Camborthids

Setting

Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderately rapid
Landform: Foothills and mountains
Parent material: Kind—residuum; source—basalt and rhyolite
Slope range: 30 to 60 percent
Elevation: 2,000 to 3,500 feet
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—47 to 50 degrees F
Frost-free period—120 to 130 days

Typical Pedon Description

A—0 to 4 inches; light yellowish brown (10YR 6/4) extremely stony loam, dark yellowish brown (10YR 4/4) moist; weak fine granular structure; soft, friable, nonsticky and nonplastic; many fine and very fine roots; few very fine pores; 20 percent pebbles, 20 percent cobbles, and 25 percent stones; mildly alkaline (pH 7.4); clear smooth boundary.

Bw—4 to 12 inches; light yellowish brown (10YR 6/4) very stony clay loam, brown (10YR 4/3) moist; moderate fine subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; many fine and very fine roots; few very fine pores; 15 percent pebbles and 25 percent stones; mildly alkaline (pH 7.4); clear smooth boundary.

Bk1—12 to 22 inches; yellowish brown (10YR 5/4) very stony loam, dark yellowish brown (10YR 4/4) moist; weak fine subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; few very fine pores; 5 percent pebbles and 30 percent stones; strongly effervescent; mildly alkaline (pH 7.5); clear smooth boundary.

Bk2—22 to 24 inches; brown (10YR 5/3) extremely stony loam, dark yellowish brown (10YR 4/4) moist; moderate fine subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; few very fine pores; 30 percent pebbles, 20 percent cobbles, and 30 percent stones; violently effervescent; mildly alkaline; (pH 7.6); clear smooth boundary.

R—24 inches; basalt with coatings of calcium carbonates.

Typical Pedon Location

Map unit in which located: Mulett-Mackey complex, 30 to 60 percent slopes
Location in survey area: About 10 miles northwest of Weiser; 1,320 feet west and 2,100 feet south of the northeast corner of sec. 4, T. 11 N., R. 7 W.

Range in Characteristics

Profile:
Depth to bedrock—20 to 40 inches
Rock fragment content—35 to 80 percent

A horizon:
Value—5 to 7 dry, 3 to 5 moist
Chroma—3 or 4 dry or moist

Bw horizon:
Value—5 to 7 dry
Chroma—3 or 4 dry or moist
Clay content—20 to 30 percent

Bk horizon:
Value—5 to 7 dry, 3 to 5 moist
Chroma—2 to 4 dry or moist

McDaniel Series

Taxonomic class: Loamy-skeletal, mixed, mesic Pachic Argixerolls

Setting

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Landform: Mountains and canyons
Parent material: Kind—colluvium and loess; source—basalt
Slope range: 5 to 60 percent
Elevation: 1,800 to 3,800 feet
Climatic data (average annual):
Precipitation—16 to 18 inches
Air temperature—48 to 50 degrees F
Frost-free period—120 to 135 days

Typical Pedon Description

A1—0 to 5 inches; brown (10YR 5/3) very stony loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure parting to moderate medium granular; slightly hard, very friable, slightly sticky and slightly plastic; many fine roots; many fine tubular pores; 20 percent pebbles, 20 percent cobbles, and 10 percent stones; neutral (pH 6.6); clear smooth boundary.

A2—5 to 10 inches; brown (10YR 5/3) extremely cobbly silty clay loam, dark brown (10YR 3/3) moist; weak and moderate fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many fine roots; many fine tubular pores; 35 percent pebbles and 35 percent stones; neutral (pH 6.6); clear wavy boundary.

Bt1—10 to 27 inches; brown (10YR 5/3) extremely cobbly silty clay loam, dark brown (10YR 3/3) moist; weak and moderate fine subangular blocky structure; slightly hard, friable, sticky and slightly plastic; common fine roots; few fine tubular pores; 40 percent pebbles and 40 percent stones; common faint and distinct clay films on faces of peds; neutral (pH 6.6); clear wavy boundary.

Bt2—27 to 60 inches; yellowish brown (10YR 5/4) extremely cobbly silty clay loam, dark yellowish brown (10YR 4/4) moist; weak and moderate fine subangular blocky structure; slightly hard, friable, sticky and slightly plastic; few fine roots; 45 percent pebbles and 45 percent cobbles; common faint and distinct clay films on faces of peds; neutral (pH 6.8).

Typical Pedon Location

Map unit in which located: McDaniel-Rockly complex, 10 to 70 percent slopes

Location in survey area: About 1.5 miles northeast of Oxbow Dam; 1,960 feet south and 340 feet west of the northeast corner of sec. 16, T. 19 N., R. 4 W.

Range in Characteristics

Profile:
Thickness of mollic epipedon—20 to 40 inches

A horizon:
Value—4 or 5 dry, 2 or 3 moist
Chroma—2 or 3 dry or moist

Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5 dry, 3 or 4 moist
Chroma—2 to 4 dry or moist
Rock fragment content—40 to 90 percent

Meland Series

Taxonomic class: Fine-loamy, mixed, mesic Ultic Argixerolls

Setting

Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderately slow
Landform: Foothills and mountains
Parent material: Kind—residuum and colluvium; source—basalt
Slope range: 4 to 60 percent
Elevation: 3,200 to 5,000 feet
Climatic data (average annual):
Precipitation—18 to 22 inches
Air temperature—47 to 49 degrees F
Frost-free period—110 to 130 days

Typical Pedon Description

A1—0 to 2 inches; dark brown (10YR 4/3) silt loam, dark brown (10YR 3/3) moist; weak thin platy structure parting to moderate fine granular; slightly hard, very firm, slightly sticky and slightly plastic; many very fine roots and few fine and medium roots; many very fine irregular and tubular pores; slightly acid (pH 6.1); clear smooth boundary.

A2—2 to 7 inches; brown (7.5YR 5/4) silt loam, dark brown (7.5YR 3/3) moist; weak thick platy structure parting to moderate very fine and fine subangular blocky; slightly hard, very firm, slightly sticky and slightly plastic; common very fine and fine roots; many very fine irregular and tubular pores; 5 percent pebbles; slightly acid (pH 6.1); abrupt smooth boundary.

BAt—7 to 15 inches; dark brown (7.5YR 4/4) clay loam, dark brown (7.5YR 3/3) moist; weak medium subangular blocky structure parting to strong very fine and fine subangular blocky; hard, firm, sticky and plastic; common very fine and fine roots; many very fine irregular pores and common fine tubular pores; 5 percent pebbles and cobbles; common faint clay films on faces of peds; slightly acid (pH 6.5); clear wavy boundary.

Bt1—15 to 22 inches; brown (7.5YR 5/4) gravelly clay loam, dark brown (7.5YR 3/4) moist; weak medium subangular blocky structure parting to strong very fine and fine subangular blocky; slightly hard, firm, sticky and plastic; common very fine and fine roots; many very fine irregular pores and common fine tubular pores; 10 percent pebbles and 5 percent cobbles; common faint clay films on faces

of peds; slightly acid (pH 6.2); clear wavy boundary.
Bt2—22 to 25 inches; dark brown (7.5YR 4/4) gravelly clay loam, dark brown (7.5YR 3/4) moist; moderate very fine and fine subangular blocky structure; hard, firm, sticky and plastic; common very fine roots and few fine roots; many very fine irregular pores and common fine tubular pores; 10 percent pebbles and 5 percent cobbles; many faint clay films on faces of peds and in pores; moderately acid (pH 6.0); abrupt wavy boundary.
R—25 inches; basalt.

Typical Pedon Location

Map unit in which located: Meland silt loam, 4 to 8 percent slopes
Location in survey area: About 1 mile southwest of Council; 50 feet north and 1,740 feet east of the southwest corner of sec. 15, T. 16 N., R. 1 W.

Range in Characteristics

Profile:
Thickness of mollic epipedon—10 to 20 inches
Base saturation—50 to 75 percent
Reaction—moderately acid to neutral
Depth to bedrock—20 to 40 inches

A horizon:
Hue—7.5YR or 10YR
Value—4 or 5 dry, 2 or 3 moist
Chroma—1 to 3 dry or moist

Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5 dry, 3 or 4 moist
Chroma—3 or 4 dry or moist

Melton Series

Taxonomic class: Fine-loamy over sandy or sandy-skeletal, mixed, acid Humic Cryaquepts

Setting

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderate in the upper part and rapid below
Landform: Outwash terraces
Parent material: Kind—alluvium over glacial outwash; source—granite
Slope range: 0 to 2 percent
Elevation: 3,800 to 4,800 feet
Climatic data (average annual):
Precipitation—22 to 24 inches
Air temperature—38 to 40 degrees F
Frost-free period—60 to 75 days

Typical Pedon Description

A—0 to 12 inches; dark gray (10YR 4/1) loam, black (10YR 2/1) moist; moderate very fine and fine granular structure parting to weak medium subangular blocky; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots and few fine roots; many very fine irregular pores; strongly acid (pH 5.5); abrupt wavy boundary.
Cg1—12 to 16 inches; brown (10YR 5/3) loam, dark grayish brown (10YR 4/2) moist; common fine prominent dark brown (7.5YR 4/4) mottles; weak medium subangular blocky structure parting to moderate fine granular; slightly hard, very friable, slightly sticky and slightly plastic; common very fine roots; many very fine irregular pores; strongly acid (pH 5.5); clear wavy boundary.
Cg2—16 to 33 inches; reddish yellow (7.5YR 6/6) gravelly sandy loam, strong brown (7.5YR 4/6) moist; many medium prominent yellowish red (5YR 4/8) mottles; weak fine subangular blocky structure; slightly hard, very friable, slightly sticky and nonplastic; few fine roots; many very fine irregular pores; 20 percent pebbles; strongly acid (pH 5.5); gradual wavy boundary.
C—33 to 60 inches; light brownish gray (10YR 6/2) very cobbly loamy sand, very dark grayish brown (10YR 3/2) moist; single grain; loose, nonsticky and nonplastic; many fine and medium pores; 10 percent pebbles and 25 percent cobbles; strongly acid (pH 5.2).

Typical Pedon Location

Map unit in which located: Melton loam, 0 to 2 percent slopes
Location in survey area: About 2 miles southeast of New Meadows; 2,000 feet south and 1,450 feet east of the northwest corner of sec. 29, T. 19 N., R. 2 E.

Range in Characteristics

Profile:
Depth to sandy or sandy-skeletal material—30 to 35 inches
Depth to water table—12 to 24 inches

A horizon:
Value—4 or 5 dry, 2 or 3 moist
Chroma—1 or 2 dry or moist
Base saturation—25 to 45 percent

C horizon:
Hue—10YR or 7.5YR

Taxadjunct Features

The Melton soils in this survey area do not have a strongly contrasting particle-size class and have high-chroma colors between depths of 12 and 20 inches. These differences, however, do not significantly affect use and management.

Midvale Series

Taxonomic class: Fine, montmorillonitic, mesic Typic Argixerolls

Setting

Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Landform: Fan terraces and lacustrine terraces
Parent material: Kind—alluvium over lacustrine sediment; source—mixed
Slope range: 0 to 20 percent
Elevation: 2,400 to 3,500 feet
Climatic data (average annual):
Precipitation—16 to 22 inches
Air temperature—46 to 50 degrees F
Frost-free period—120 to 145 days

Typical Pedon Description

A1—0 to 4 inches; dark grayish brown (10YR 4/2) silty clay loam, very dark brown (10YR 2/2) moist; strong very fine granular structure; hard, firm, sticky and plastic; many fine roots; many fine irregular pores; neutral (pH 6.8); abrupt smooth boundary.

A2—4 to 10 inches; dark grayish brown (10YR 4/2) silty clay loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure; hard, firm, sticky and plastic; many fine and medium roots; common very fine tubular pores; common very dark brown (10YR 2/2) stains in pores; neutral (pH 6.8); clear smooth boundary.

BA—10 to 14 inches; dark brown (7.5YR 4/2) clay loam, dark reddish brown (5YR 2/2) moist; moderate fine and medium prismatic structure parting to strong fine and medium subangular and angular blocky; extremely hard, very firm, very sticky and very plastic; common very fine roots; many very fine and fine tubular pores; common very dark brown (10YR 2/2) stains in pores; many prominent clay films on faces of peds and in pores; neutral (pH 7.0); clear smooth boundary.

Bt—14 to 19 inches; dark brown (7.5YR 4/2) clay loam, dark reddish brown (5YR 3/2) moist; strong medium prismatic structure parting to strong medium subangular blocky; extremely hard, very firm, very sticky and very plastic; common very fine roots on faces of peds and few very fine roots in peds; many very fine and fine tubular pores; many prominent clay films on faces of peds and in pores; neutral (pH 7.0); clear smooth boundary.

Btb—19 to 30 inches; dark yellowish brown (10YR 4/4) clay, dark brown (10YR 3/3) moist; strong medium prismatic structure; extremely hard, very firm, very sticky and very plastic; few very fine roots; few fine tubular pores; many prominent clay films on faces of peds and in pores; neutral (pH 7.0); abrupt wavy boundary.

BCqkb—30 to 39 inches; pale brown (10YR 6/3) loam with thin extremely hard and brittle discontinuous silica-iron cap, dark brown (10YR 4/3) moist; weak coarse prismatic structure; hard, friable, sticky and plastic; few very fine roots; common fine and medium tubular pores; about 25 percent of horizon has strongly effervescent splotches; few krotovinas 2 to 4 inches in diameter; common faint clay films on vertical faces of peds; neutral (pH 7.2); abrupt wavy boundary.

C1—39 to 56 inches; pale brown (10YR 6/3) loam, brown (10YR 4/3) moist; massive; hard, firm, sticky and plastic; few very fine roots; many very fine and fine irregular and tubular pores; about 25 percent of horizon is strongly effervescent; neutral (pH 7.2); clear smooth boundary.

C2—56 to 60 inches; yellowish brown (10YR 5/4) very fine sandy loam, dark yellowish brown (10YR 3/4) moist; massive; hard, firm, nonsticky and nonplastic; many very fine and fine irregular and tubular pores; neutral (pH 7.2).

Typical Pedon Location

Map unit in which located: Midvale silty clay loam, 2 to 4 percent slopes
Location in survey area: About 2 miles northwest of Midvale; 2,580 feet west and 1,330 feet south of the northeast corner of sec. 7, T. 13 N., R. 3 W.

Range in Characteristics

Profile:
Thickness of mollic epipedon—10 to 20 inches

A horizon:
Value—3 to 5 dry, 2 or 3 moist
Chroma—2 or 3 dry or moist

Bt horizon:
Hue—10YR or 7.5YR
Value—4 or 5 dry, 2 or 3 moist
Chroma—2 to 4 dry, 2 or 3 moist
Texture—clay loam, silty clay, or clay
Clay content—35 to 45 percent

Molly Series

Taxonomic class: Coarse-loamy, mixed Andic Cryochrepts

Setting

Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Landform: Mountains
Parent material: Kind—residuum; source—volcanic ash over gneiss, schist, and granite
Slope range: 30 to 65 percent
Elevation: 3,800 to 5,400 feet
Climatic data (average annual):
Precipitation—30 to 40 inches
Air temperature—38 to 42 degrees F
Frost-free period—60 to 80 days

Typical Pedon Description

Oe—1 inch to 0; partially decomposed cones, needles, twigs, and leaves.
A—0 to 5 inches; brown (10YR 5/3) silt loam, very dark grayish brown (10YR 3/2) moist; moderate medium granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine, fine, and medium irregular pores; 1 percent pebbles; neutral (pH 7.0); clear wavy boundary.
Bs—5 to 11 inches; pale brown (10YR 6/3) silt loam, brown (10YR 4/3) moist; moderate coarse subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine, fine, and medium roots; many very fine, fine, and medium tubular pores; 3 percent pebbles; neutral (pH 7.0); gradual wavy boundary.
2Bw—11 to 26 inches; light brownish gray (10YR 6/2) sandy loam, dark grayish brown (10YR 4/2) moist; moderate coarse subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine, fine, and medium roots; common very fine, fine, and medium tubular pores; 7 percent pebbles; slightly acid (pH 6.5); clear wavy boundary.
2C1—26 to 40 inches; pale brown (10YR 6/3) gravelly sandy loam, yellowish brown (10YR 5/4) moist; massive; slightly hard, friable, nonsticky and nonplastic; common very fine, fine, and medium roots; common very fine, fine, and medium tubular pores; 25 percent pebbles and 5 percent cobbles; slightly acid (pH 6.5); gradual wavy boundary.
2C2—40 to 60 inches; pale brown (10YR 6/3) very gravelly sandy loam, yellowish brown (10YR 5/4) moist; massive; slightly hard, friable, nonsticky and nonplastic; 30 percent pebbles and 20 percent cobbles; slightly acid (pH 6.5).
Cr—60 inches; weathered granite.

Typical Pedon Location

Map unit in which located: Molly-Littlesalmon complex, 30 to 60 percent slopes
Location in survey area: About 12 miles north of New Meadows; 1,200 feet south and 250 feet east of the northwest corner of sec. 15, T. 21 N., R. 2 E.

Range in Characteristics

Profile:
Depth to paralithic contact—40 to 60 inches

Bs horizon:
Value—4 to 6 dry, 3 to 5 moist
Chroma—3 or 4 dry or moist
Base saturation—30 to 50 percent

2Bw and 2C horizons:
Texture—sandy loam, coarse sandy loam, gravelly sandy loam, or very gravelly sandy loam

Moonstone Series

Taxonomic class: Coarse-loamy, mixed, frigid Pachic Ultic Haploxerolls

Setting

Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderately rapid
Landform: Mountains
Parent material: Kind—colluvium and residuum; source—granite
Slope range: 30 to 60 percent
Elevation: 5,300 to 5,600 feet
Climatic data (average annual):
Precipitation—16 to 18 inches
Air temperature—40 to 44 degrees F
Frost-free period—70 to 90 days

Typical Pedon Description

A1—0 to 8 inches; very dark grayish brown (10YR 3/2) coarse sandy loam, black (10YR 2/1) moist; weak

very fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; slightly acid (pH 6.4); clear smooth boundary.

AB—8 to 20 inches; very dark grayish brown (10YR 3/2) coarse sandy loam, black (10YR 2/1) moist; weak medium subangular blocky structure parting to moderate medium granular; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots and few fine roots; many very fine tubular pores; slightly acid (pH 6.4); clear wavy boundary.

Bw—20 to 34 inches; grayish brown (10YR 5/2) gravelly coarse sandy loam, very dark grayish brown (10YR 3/2) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; common fine roots and few coarse roots; many very fine tubular pores; 15 percent pebbles; slightly acid (pH 6.4); abrupt wavy boundary.

Cr—34 inches; weathered granite.

Typical Pedon Location

Map unit in which located: Moonstone coarse sandy loam, 30 to 60 percent slopes

Location in survey area: About 20 miles north of Weiser; 400 feet west and 2,600 feet south of the northeast corner of sec. 22, T. 14 N., R. 6 W.

Range in Characteristics

Profile:
Thickness of mollic epipedon—20 to 34 inches
Depth to paralithic contact—20 to 40 inches

A horizon:
Value—3 or 4 dry, 2 or 3 moist
Chroma—1 or 2 dry or moist
Base saturation—50 to 75 percent

Bw horizon:
Value—4 or 5 dry, 2 or 3 moist
Rock fragment content—5 to 35 percent

Moulton Series

Taxonomic class: Coarse-loamy over sandy or sandy-skeletal, mixed, mesic Typic Haplaquolls

Setting

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderately rapid in the upper part and rapid below
Landform: Stream terraces
Parent material: Kind—alluvium; source—granite
Slope range: 0 to 3 percent
Elevation: 2,100 to 2,300 feet
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—48 to 52 degrees F
Frost-free period—150 to 155 days

Typical Pedon Description

A1—0 to 9 inches; grayish brown (10YR 5/2) fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; slightly hard, very friable, slightly sticky and nonplastic; common very fine roots and few medium roots; many fine irregular pores; neutral (pH 6.6); abrupt smooth boundary.

A2—9 to 15 inches; grayish brown (10YR 5/2) fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and nonplastic; common very fine roots and few medium roots; many fine irregular pores; neutral (pH 6.8); abrupt smooth boundary.

Bw1—15 to 22 inches; brown (10YR 5/3) fine sandy loam, dark brown (10YR 3/3) moist; common fine faint dark yellowish brown (10YR 3/4) mottles; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and nonplastic; common very fine roots; many fine irregular pores; neutral (pH 6.8); clear wavy boundary.

Bw2—22 to 35 inches; brown (10YR 5/3) fine sandy loam, dark brown (10YR 3/3) moist; common fine distinct dark yellowish brown (10YR 4/6) mottles; massive; slightly hard, very friable, slightly sticky and nonplastic; few very fine roots; many fine irregular pores; neutral (pH 6.8); clear wavy boundary.

2C—35 to 60 inches; multicolored very gravelly sand; 40 percent pebbles.

Typical Pedon Location

Map unit in which located: Moulton fine sandy loam, 0 to 3 percent slopes

Location in survey area: About 0.2 mile southeast of Weiser; 2,700 feet east and 1,300 feet north of the southwest corner of sec. 33, T. 11 N., R. 15 W.

Range in Characteristics

Profile:
Depth to mottles—8 to 20 inches

A horizon:
Hue—2.5Y or 10YR
Value—4 or 5 dry, 2 or 3 moist
Chroma—1 or 2 dry or moist

Bw horizon:
Hue—2.5Y or 10YR
Texture—fine sandy loam or sandy loam

Taxadjunct Features

The Moulton soils in this survey area have a thicker mollic epipedon than is typical for the Moulton series. This difference, however, does not significantly affect use and management.

Mulett Series

Taxonomic class: Loamy-skeletal, mixed, mesic Lithic Xerollic Camborthids

Setting

Depth class: Shallow
Drainage class: Well drained
Permeability: Moderate
Landform: Foothills and mountains
Parent material: Kind—residuum; source—basalt and rhyolite
Slope range: 30 to 60 percent
Elevation: 2,000 to 3,500 feet
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—47 to 50 degrees F
Frost-free period—120 to 130 days

Typical Pedon Description

A—0 to 2 inches; light yellowish brown (10YR 6/4) very stony loam, dark yellowish brown (10YR 4/4) moist; moderate medium granular structure; loose, friable, nonsticky and nonplastic; common fine roots; many very fine irregular pores; 10 percent pebbles, 15 percent cobbles, and 15 percent stones; mildly alkaline (pH 7.8); clear smooth boundary.

Bw—2 to 7 inches; pale brown (10YR 6/3) very stony loam, brown (10YR 5/3) moist; moderate medium granular structure; loose, friable, nonsticky and nonplastic; common fine and very fine roots; many very fine irregular pores; 10 percent pebbles, 20 percent cobbles, and 25 percent stones; moderately alkaline (pH 8.0); clear smooth boundary.

Bk—7 to 12 inches; dark brown (10YR 4/3) extremely stony loam, dark yellowish brown (10YR 3/4) moist; moderate fine subangular blocky structure; loose, friable, nonsticky and nonplastic; few medium roots; many fine and very fine tubular and irregular pores; 15 percent pebbles, 20 percent cobbles, and 30 percent stones; strongly effervescent; moderately alkaline (pH 8.0); clear smooth boundary.

R—12 inches; weathered basalt; strongly effervescent in cracks and on surfaces.

Typical Pedon Location

Map unit in which located: Mulett-Mackey complex, 30 to 60 percent slopes
Location in survey area: About 10 miles northwest of Weiser; 2,100 feet south and 1,320 feet west of the northeast corner of sec. 17, T. 11 N., R. 7 W.

Range in Characteristics

Profile:
Depth to bedrock—10 to 20 inches
Particle-size control section—averages 35 to 70 percent rock fragments

A horizon:
Value—5 to 7 dry, 4 or 5 moist
Chroma—2 to 4 dry or moist

Bw and Bk horizons:
Chroma—3 or 4 dry or moist
Clay content—15 to 25 percent

Naz Series

Taxonomic class: Coarse-loamy, mixed Pachic Cryoborolls

Setting

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Landform: Mountains
Parent material: Kind—residuum; source—porphyritic diorite and granite
Slope range: 40 to 70 percent
Elevation: 2,800 to 4,400 feet
Climatic data (average annual):
Precipitation—25 to 28 inches
Air temperature—38 to 41 degrees F
Frost-free period—70 to 80 days

Typical Pedon Description

Oi—1 inch to 0; slightly decomposed needles, cones, twigs, and leaves.

A1—0 to 8 inches; gray (10YR 5/1) loam, very dark gray (10YR 3/l) moist; moderate fine granular structure; slightly hard, very friable, nonsticky and slightly plastic; many very fine and fine roots and common medium roots; many very fine and fine

irregular pores; 1 percent pebbles; slightly acid (pH 6.4); gradual smooth boundary.
A2—8 to 23 inches; grayish brown (10YR 5/2) loam, very dark grayish brown (10YR 3/2) moist; moderate fine granular structure; slightly hard, very friable, nonsticky and slightly plastic; common very fine and fine roots and few coarse roots; many very fine and fine irregular and tubular pores; 1 percent pebbles; moderately acid (pH 6.0); clear wavy boundary.
C1—23 to 27 inches; light brownish gray (10YR 6/2) coarse sandy loam, dark grayish brown (10YR 4/2) moist; massive; slightly hard, very friable, nonsticky and slightly plastic; common very fine and fine roots; common very fine and fine irregular and tubular pores; 2 percent pebbles; slightly acid (pH 6.2); clear wavy boundary.
C2—27 to 38 inches; brown (10YR 5/3) coarse sandy loam, brown (10YR 4/3) moist; massive; slightly hard, very friable, nonsticky and nonplastic; common very fine roots and few fine roots; common very fine and fine tubular pores; 5 percent pebbles; slightly acid (pH 6.2); gradual smooth boundary.
C3—38 to 60 inches; brown (10YR 5/3) coarse sandy loam, dark brown (10YR 4/3) moist; massive; slightly hard, very friable, nonsticky and nonplastic; few very fine and fine roots; common very fine and fine tubular pores; slightly acid (pH 6.4).

Typical Pedon Location

Map unit in which located: Nazaton-Naz complex, 40 to 90 percent slopes
Location in survey area: About 19 miles north of New Meadows; 1,700 feet north and 50 feet west of the southeast corner of sec. 16, T. 22 N., R. 1 E.

Range in Characteristics

Profile:
Thickness of mollic epipedon—16 to 45 inches

A horizon:
Value—3 to 5 dry, 2 or 3 moist
Chroma—1 to 3 dry or moist

C horizon:
Value—4 to 8 dry, 3 to 6 moist
Chroma—2 or 3 dry or moist

Nazaton Series

Taxonomic class: Loamy-skeletal, mixed Pachic Cryoborolls

Setting

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Landform: Mountains
Parent material: Kind—residuum; source—granite
Slope range: 40 to 90 percent
Elevation: 2,800 to 4,400 feet
Climatic data (average annual):
Precipitation—24 to 28 inches
Air temperature—38 to 41 degrees F
Frost-free period—70 to 80 days

Typical Pedon Description

Oi—1 inch to 0; slightly decomposed cones, needles, twigs, and leaves.
A1—0 to 7 inches; very dark grayish brown (10YR 3/2) gravelly loam, black (10YR 2/1) moist; weak very fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine roots, common medium roots, and few coarse roots; many very fine and fine irregular pores; 10 percent pebbles and 5 percent cobbles; slightly acid (pH 6.4); gradual wavy boundary.
A2—7 to 16 inches; very dark grayish brown (10YR 3/2) gravelly loam, black (10YR 2/1) moist; weak very fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine roots, common fine and medium roots, and few coarse roots; many very fine and fine irregular pores; 10 percent pebbles and 5 percent cobbles; slightly acid (pH 6.4); clear wavy boundary.
AB—16 to 20 inches; brown (10YR 4/3) very cobbly loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine and fine roots and few coarse roots; many very fine and fine tubular pores; 20 percent pebbles, 25 percent cobbles, and 2 percent stones; slightly acid (pH 6.4); gradual wavy boundary.
Bw—20 to 36 inches; brown (10YR 5/3) extremely gravelly sandy loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine and fine roots and few coarse roots; many very fine and fine tubular pores and few medium tubular pores; 35 percent pebbles, 20 percent cobbles, and 5 percent stones; slightly acid (pH 6.4); gradual wavy boundary.
C—36 to 60 inches; yellowish brown (10YR 5/4) extremely gravelly sandy loam, dark yellowish brown (10YR 3/4) moist; massive; soft, very

friable, nonsticky and nonplastic; few very fine and coarse roots; many very fine and fine tubular pores; 30 percent pebbles, 25 percent cobbles, and 5 percent stones; slightly acid (pH 6.4).

Typical Pedon Location

Map unit in which located: Nazaton-Naz complex, 40 to 90 percent slopes
Location in survey area: About 20 miles north of New Meadows; 50 feet south and 2,800 feet east of the northwest corner of sec. 9, T. 22 N., R. 1 E.

Range in Characteristics

Profile:
Thickness of mollic epipedon—16 to 40 inches
Particle-size control section—averages 35 to 60 percent rock fragments

A horizon:
Value—4 or 5 dry, 2 or 3 moist
Chroma—2 or 3 dry, 1 or 2 moist

Bw horizon:
Value—5 or 6 dry, 3 or 4 moist
Chroma—3 or 4 dry or moist

Newell Series

Taxonomic class: Fine-loamy, mixed, mesic Calcic Pachic Argixerolls

Setting

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Landform: Fan terraces
Parent material: Kind—alluvium; source—basalt
Slope range: 0 to 12 percent
Elevation: 2,200 to 3,400 feet
Climatic data (average annual):
Precipitation—12 to 16 inches
Air temperature—47 to 51 degrees F
Frost-free period—110 to 130 days

Typical Pedon Description

A1—0 to 11 inches; dark grayish brown (10YR 4/2) clay loam, very dark brown (10YR 2/2) moist; moderate fine granular structure; slightly hard, friable, sticky and plastic; many very fine and fine roots; many very fine irregular pores; neutral (pH 6.8); clear smooth boundary.

A2—11 to 23 inches; dark grayish brown (10YR 4/2) clay loam, very dark brown (10YR 2/2) moist; moderate fine subangular blocky structure; slightly hard, friable, sticky and plastic; many very fine and fine roots; many very fine irregular and tubular pores; neutral (pH 7.2); clear smooth boundary.

Bt—23 to 34 inches; dark grayish brown (10YR 4/2) silty clay loam, dark brown (10YR 3/3) moist; weak medium prismatic structure parting to weak medium subangular blocky; slightly hard, firm, sticky and plastic; common very fine roots; many fine tubular pores; common faint clay films on faces of peds and in pores; mildly alkaline (pH 7.4); gradual wavy boundary.

Btk1—34 to 50 inches; dark grayish brown (10YR 4/2) silty clay loam, dark brown (10YR 3/3) moist; weak fine prismatic structure parting to moderate medium subangular blocky; hard, firm, sticky and plastic; few very fine roots; many fine tubular pores; many distinct clay films on faces of peds and in pores; slightly effervescent; common veins and splotches of lime; neutral (pH 7.2); gradual wavy boundary.

Btk2—50 to 60 inches; grayish brown (10YR 5/2) clay loam, brown (10YR 4/3) moist; weak coarse subangular blocky structure; hard, firm, sticky and plastic; few very fine roots; common very fine tubular pores; many faint clay films on faces of peds and in pores; 5 percent pebbles; strongly effervescent; neutral (pH 7.2).

Typical Pedon Location

Map unit in which located: Newell clay loam, 0 to 2 percent slopes
Location in survey area: About 3 miles south of Crane Creek Reservoir; 2,350 feet east and 360 feet south of the northwest corner of sec. 10, T. 11 N., R. 2 W.

Range in Characteristics

Profile:
Thickness of mollic epipedon—20 to 50 inches
Depth to calcium carbonates—30 to 42 inches

A horizon:
Value—2 to 4 dry, 2 or 3 moist
Chroma—1 or 2 dry or moist

Bt horizon:
Value—2 to 5 dry, 3 or 4 moist
Chroma—1 to 3 dry or moist

Texture—clay loam or silty clay loam
Reaction—neutral or mildly alkaline

Btk horizon:
Rock fragment content—5 to 70 percent
Reaction—neutral or mildly alkaline

Notus Series

Taxonomic class: Sandy-skeletal, mixed, mesic Aquic Xerofluvents

Setting

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderately rapid
Landform: Stream terraces
Parent material: Kind—alluvium; source—granite
Slope range: 0 to 3 percent
Elevation: 2,100 to 2,300 feet
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—50 to 52 degrees F
Frost-free period—150 to 155 days

Typical Pedon Description

A—0 to 1 inch; grayish brown (10YR 5/2) sandy loam, very dark grayish brown (10YR 3/2) moist; weak very fine granular structure; soft, very friable, slightly sticky and nonplastic; many fine roots; many fine irregular pores; neutral (pH 6.8); abrupt smooth boundary.

C1—1 inch to 8 inches; light brownish gray (10YR 6/2) sandy loam, dark grayish brown (10YR 4/2) moist; common faint yellowish brown (10YR 5/4) mottles in lower part; weak fine granular structure; soft, very friable, slightly sticky and nonplastic; common fine roots; many very fine irregular pores; neutral (pH 6.8); abrupt smooth boundary.

2C2—8 to 60 inches; white (10YR 8/2) and gray (7.5YR 6/1) very gravelly sand, white (10YR 8/2) and dark gray (7.5YR 4/1) moist; single grain; loose, nonsticky and nonplastic; 40 percent pebbles; neutral (pH 6.8).

Typical Pedon Location

Map unit in which located: Notus sandy loam, 0 to 3 percent slopes
Location in survey area: About 3 miles east of Weiser; 2,270 feet north and 640 feet west of the southeast corner of sec. 2, T. 10 N., R. 5 W.

Range in Characteristics

Profile:
Depth to mottles that have chroma of 2 or less—7 to 20 inches
Depth to water table (artificially lowered)—36 to 60 inches

Nyssaton Series

Taxonomic class: Coarse-silty, mixed, mesic Xerollic Calciorthids

Setting

Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Landform: Fan terraces
Parent material: Kind—unconsolidated lacustrine sediment; source—mixed
Slope range: 0 to 2 percent
Elevation: 2,100 to 2,300 feet
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—50 to 52 degrees F
Frost-free period—150 to 155 days

Typical Pedon Description

Ap—0 to 12 inches; light brownish gray (2.5Y 6/2) silt loam, dark grayish brown (10YR 4/2) moist; weak very fine granular structure; slightly hard, very friable, nonsticky and slightly plastic; many fine and very fine roots; many very fine irregular pores; slightly effervescent; moderately alkaline (pH 8.2); abrupt smooth boundary.

Bk1—12 to 22 inches; white (2.5Y 8/2) silt loam, grayish brown (10YR 5/2) moist; massive; slightly hard, very friable, nonsticky and slightly plastic; many fine roots; many very fine tubular pores; violently effervescent; moderately alkaline (pH 8.2); clear smooth boundary.

Bk2—22 to 40 inches; light gray (2.5Y 7/2) silt loam, light brownish gray (2.5Y 6/2) moist; massive; slightly hard, very friable, nonsticky and slightly plastic; few fine roots; common very fine tubular pores; violently effervescent; filaments and threads of calcium carbonates; 10 percent cicada krotovinas; strongly alkaline (pH 8.6); clear smooth boundary.

C—40 to 60 inches; 70 percent grayish brown (2.5Y 5/3) and 30 percent white (2.5Y 8/2) silt loam,

brown (10YR 4/3) and light gray (2.5Y 7/2) moist; moderate medium platy structure; slightly hard, very friable, nonsticky and slightly plastic; many very fine tubular pores; strongly effervescent; strongly alkaline (pH 8.6).

Typical Pedon Location

Map unit in which located: Nyssaton silt loam, 0 to 2 percent slopes
Location in survey area: About 3 miles southeast of Weiser; 1,120 feet south and 1,800 feet west of the northeast corner of sec. 10, T. 10 N., R. 2 W.

Range in Characteristics

Profile:
Depth to calcium carbonates—8 to 22 inches

Bk horizon:
Calcium carbonate equivalent—15 to 20 percent

Odermott Series

Taxonomic class: Clayey over sandy or sandy-skeletal, montmorillonitic, mesic Typic Argixerolls

Setting

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow in the upper part and very rapid below
Landform: Fan terraces
Parent material: Kind—unconsolidated sediment; source—acid igneous rock
Slope range: 2 to 30 percent
Elevation: 3,000 to 3,500 feet
Climatic data (average annual):
Precipitation—20 to 23 inches
Air temperature—48 to 50 degrees F
Frost-free period—110 to 120 days

Typical Pedon Description

Ap—0 to 6 inches; brown (7.5YR 4/2) clay loam, dark brown (7.5YR 3/2) moist; strong very fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; slightly acid (pH 6.5); abrupt smooth boundary.
Bt1—6 to 15 inches; brown (7.5YR 4/4) clay loam, dark brown (7.5YR 3/2) moist; strong medium and coarse subangular blocky structure; hard, firm, sticky and plastic; common very fine roots; common very fine tubular pores; slightly acid (pH 6.5); clear smooth boundary.
Bt2—15 to 26 inches; reddish brown (5YR 4/4) clay, dark reddish brown (5YR 3/4) moist; strong medium prismatic structure parting to strong coarse subangular blocky; very hard, very firm, very sticky and very plastic; few very fine roots; common very fine tubular pores; many distinct clay films on peds and in pores; 5 percent pebbles; slightly acid (pH 6.5); gradual smooth boundary.
Bt3—26 to 34 inches; yellowish red (5YR 4/6) clay, dark reddish brown (5YR 3/4) moist; strong medium subangular blocky structure; very hard, very firm, very sticky and very plastic; few very fine roots; many very fine tubular pores; common distinct clay films on faces of peds and in pores; 30 percent pebbles; slightly acid (pH 6.4); clear irregular boundary.
2C1—34 to 48 inches; olive brown (2.5Y 3/4) pebbles and sand; massive; very hard, very firm, nonsticky and nonplastic; few very fine roots; few very fine tubular pores; 90 percent pebbles, half of which are hard; slightly acid (pH 6.2); gradual smooth boundary.
2C2—48 to 60 inches; light yellowish brown (10YR 6/4) pebbles, cobbles, and sand; single grain; loose, nonsticky and nonplastic; few fine roots; many coarse irregular pores; 70 percent pebbles and 20 percent cobbles; slightly acid (pH 6.2).

Typical Pedon Location

Map unit in which located: Appledellia-Odermott complex, 2 to 4 percent slopes
Location in survey area: About 6 miles south of Council; 3,000 feet north and 1,100 feet west of the southeast corner of sec. 15, T. 15 N., R. 1 W.

Range in Characteristics

Profile:
Thickness of mollic epipedon—8 to 20 inches
Depth to sandy or sandy-skeletal material—24 to 40 inches

A horizon:
Hue—10YR or 7.5YR
Value—3 or 4 dry, 2 or 3 moist
Chroma—1 or 2 dry or moist

Bt horizon:
Hue—7.5YR or 5YR
Value—3 or 4 dry or moist
Chroma—3 to 6 dry, 2 to 4 moist
Texture—sandy clay loam, clay loam, sandy clay, or clay

Oldsferry Series

Taxonomic class: Loamy-skeletal, mixed, mesic Typic Haploxerolls

Setting

Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Landform: Mountains and canyons
Parent material: Kind—residuum; source—shale
Slope range: 25 to 65 percent
Elevation: 2,100 to 3,600 feet
Climatic data (average annual):
Precipitation—12 to 18 inches
Air temperature—46 to 50 degrees F
Frost-free period—120 to 145 days

Typical Pedon Description

A1—0 to 4 inches; grayish brown (10YR 5/2) shaly loam, dark brown (10YR 3/3) moist; weak fine granular structure; soft, friable, nonsticky and nonplastic; common fine and very fine roots; many fine and very fine tubular and irregular pores; 20 percent shale fragments; neutral (pH 7.0); clear smooth boundary.

A2—4 to 18 inches; brown (10YR 5/3) very shaly loam, dark brown (10YR 3/3) moist; weak thin platy structure; soft, friable, nonsticky and nonplastic; common fine and very fine roots; common fine and very fine tubular and irregular pores; 50 percent shale fragments; neutral (pH 7.2); clear smooth boundary.

Bw—18 to 28 inches; yellowish brown (10YR 5/4) very shaly loam, dark yellowish brown (10YR 3/4) moist; weak fine granular structure; soft, friable, slightly sticky and slightly plastic; few very fine roots; many fine tubular pores; 55 percent shale fragments; neutral (pH 7.2); clear smooth boundary.

R—28 inches; shale.

Typical Pedon Location

Map unit in which located: Oldsferry shaly loam, 25 to 65 percent slopes
Location in survey area: About 20 miles northwest of Weiser; 600 feet west and 320 feet south of the northeast corner of sec. 8, T. 14 N., R. 7 W.

Range in Characteristics

Profile:
Depth to bedrock—20 to 40 inches
Particle-size control section—averages 40 to 60 percent rock fragments

A horizon:
Value—5 or 6 dry, 3 or 4 moist
Chroma—1 to 3 dry, 2 or 3 moist

Bw horizon:
Value—5 or 6 dry, 3 or 4 moist
Chroma—2 to 4 dry, 3 or 4 moist
Clay content—10 to 25 percent

Onyx Series

Taxonomic class: Coarse-silty, mixed, mesic Cumulic Haploxerolls

Setting

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Landform: Fan terraces
Parent material: Kind—alluvium; source—mixed
Slope range: 0 to 3 percent
Elevation: 3,100 to 3,200 feet
Climatic data (average annual):
Precipitation—14 to 16 inches
Air temperature—48 to 52 degrees F
Frost-free period—135 to 145 days

Typical Pedon Description

Ap—0 to 6 inches; brown (10YR 5/3) silt loam, very dark grayish brown (10YR 3/2) moist; weak thin and medium platy structure parting to weak fine granular; soft, friable, sticky and plastic; many fine roots; many very fine irregular pores; neutral (pH 6.6); abrupt smooth boundary.

C1—6 to 24 inches; brown (10YR 5/3) silt loam, very dark grayish brown (10YR 3/2) moist; weak thin platy structure; soft, friable, sticky and plastic; common fine roots; many very fine tubular pores; neutral (pH 6.8); clear smooth boundary.

C2—24 to 60 inches; brown (10YR 5/3) silt loam, very dark grayish brown (10YR 3/2) moist; massive; soft, friable, sticky and plastic; few fine roots; many very fine tubular pores; neutral (pH 7.0).

Typical Pedon Location

Map unit in which located: Onyx silt loam, 0 to 3 percent slopes
Location in survey area: About 22 miles east of Midvale; 1,200 feet east and 1,900 feet north of the southwest corner of sec. 32, T. 13 N., R. 1 W.

Range in Characteristics

Profile:
Thickness of mollic epipedon—40 to 60 inches

Owyhee Series

Taxonomic class: Coarse-silty, mixed, mesic Xerollic Camborthids

Setting

Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Landform: Lacustrine terraces
Parent material: Kind—unconsolidated sediment; source—mixed
Slope range: 0 to 20 percent
Elevation: 2,100 to 2,400 feet
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 52 degrees F
Frost-free period—150 to 155 days

Typical Pedon Description

A—0 to 12 inches; pale brown (10YR 6/3) silt loam, brown (10YR 4/3) moist; weak very fine granular structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; few very fine vesicular pores; moderately alkaline (pH 8.0); abrupt smooth boundary.

Bw—12 to 19 inches; pale brown (10YR 6/3) silt loam, brown (10YR 4/3) moist; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many fine roots; common very fine tubular pores; moderately alkaline (pH 8.0); clear smooth boundary.

Bk—19 to 21 inches; light gray (10YR 7/2) silt loam, grayish brown (10YR 5/2) moist; weak medium platy structure; hard, friable, slightly sticky and slightly plastic; few very fine and fine roots; common very fine and fine tubular pores; strongly effervescent; moderately alkaline (pH 8.0); gradual smooth boundary.

C—21 to 60 inches; light gray (10YR 7/2) silt loam, grayish brown (10YR 5/2) moist; strong thin platy structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; few very fine tubular pores; slightly effervescent; moderately alkaline (pH 8.0).

Typical Pedon Location

Map unit in which located: Owyhee silt loam, 12 to 20 percent slopes (fig. 14)
Location in survey area: In Weiser; 150 feet south and 50 feet west of the northeast corner of sec. 32, T. 11 N., R. 5 W.

Range in Characteristics

Profile:
Depth to calcium carbonates—12 to 24 inches
Depth to laminated sediment—20 to 35 inches

A horizon:
Value—6 or 7 dry, 4 or 5 moist
Chroma—2 or 3 dry or moist

Paniogue Series

Taxonomic class: Coarse-loamy over sandy or sandy-skeletal, mixed, mesic Xerollic Camborthids

Setting

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper part and very rapid below
Landform: Fan terraces
Parent material: Kind—alluvium; source—mixed
Slope range: 0 to 2 percent
Elevation: 2,100 to 2,200 feet
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—51 to 54 degrees F
Frost-free period—145 to 155 days

Typical Pedon Description

Ap—0 to 12 inches; pale brown (10YR 6/3) loam, very dark grayish brown (10YR 3/2) moist; weak very fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; slightly effervescent; mildly alkaline (pH 7.6); abrupt smooth boundary.

AB—12 to 16 inches; light gray (10YR 7/2) very fine sandy loam, brown (10YR 5/2) moist; weak fine granular structure; loose, very friable, slightly sticky and slightly plastic; many very fine roots; few very fine tubular pores; slightly effervescent; mildly alkaline (pH 7.8); abrupt smooth boundary.

Bw—16 to 25 inches; pale brown (10YR 6/3) silt loam, brown (10YR 4/3) moist; weak medium subangular blocky structure; hard, friable, slightly sticky and

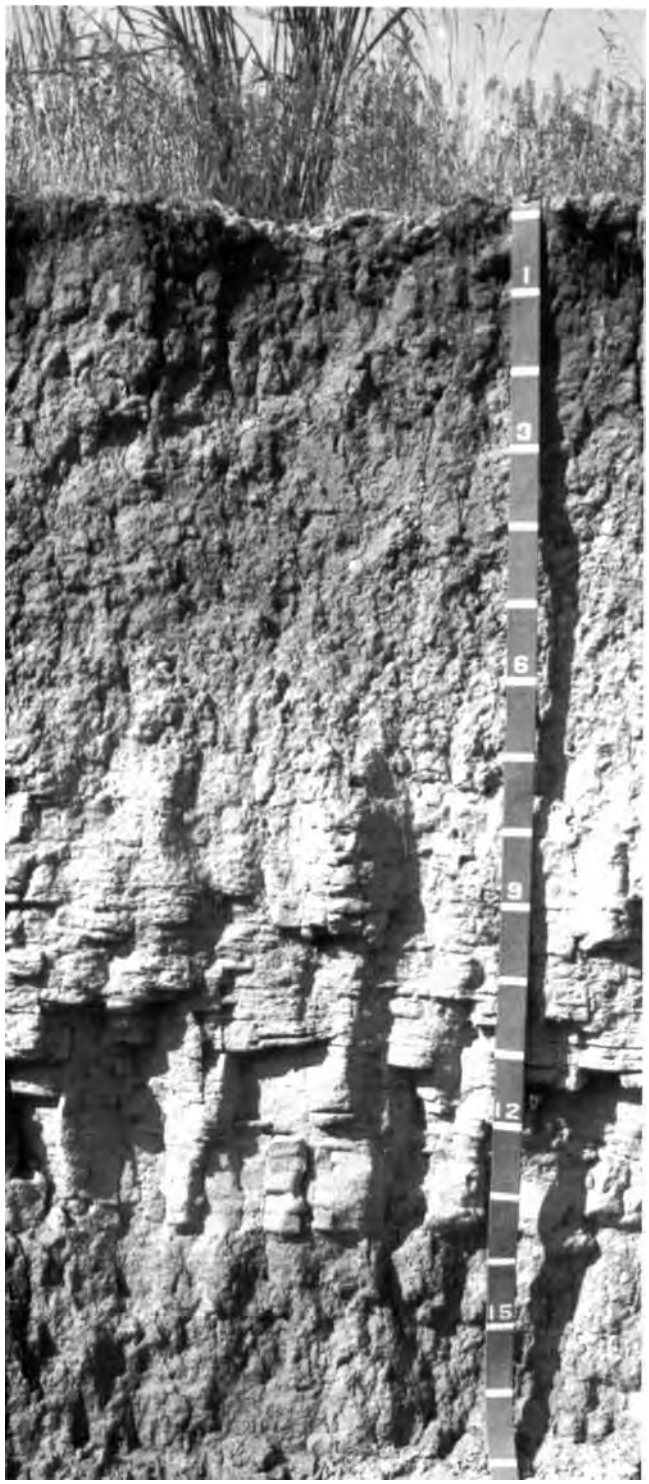

Figure 14.—Profile of Owyhee silt loam, 12 to 20 percent slopes (numerals on tape indicate decimeters). Note the strong platy structure at a depth of about 28 inches (7 decimeters).

slightly plastic; many very fine roots; common very fine tubular pores; slightly effervescent; mildly alkaline (pH 7.8); clear smooth boundary.

Bk—25 to 32 inches; pale brown (10YR 6/3) silt loam, brown (10YR 4/3) moist; weak very fine subangular blocky structure; hard, friable, slightly sticky and slightly plastic; many very fine roots; common very fine tubular pores; strongly effervescent; moderately alkaline (pH 8.2); clear smooth boundary.

2Ck1—32 to 46 inches; light gray (10YR 7/2) fine sand, light brownish gray (10YR 6/2) moist; massive; hard, nonsticky and nonplastic; few very fine roots; many fine irregular pores; violently effervescent; many nodules; strongly alkaline (pH 8.6); clear smooth boundary.

2Ck2—46 to 60 inches; light gray (10YR 7/2) fine sand, grayish brown (10YR 5/2) moist; single grain; loose, very friable, nonsticky and nonplastic; few very fine roots; many fine irregular pores; strongly effervescent; moderately alkaline (pH 8.2).

Typical Pedon Location

Map unit in which located: Paniogue loam, 0 to 2 percent slopes

Location in survey area: About 3 miles southeast of Weiser; 2,650 feet west and 1,080 feet north of the southeast corner of sec. 10, T. 10 N., R. 5 W.

Range in Characteristics

Profile:
Depth to sandy or sandy-skeletal material—20 to 40 inches

A horizon:
Value—5 or 6 dry, 3 or 4 moist
Chroma—2 or 3 dry or moist

Bw horizon:
Value—6 or 7 dry, 4 or 5 moist
Chroma—2 or 3 dry or moist
Texture—silt loam, very fine sandy loam, or loam

Bk horizon:
Calcium carbonate equivalent—15 to 30 percent

Payette Series

Taxonomic class: Coarse-loamy, mixed, mesic Aridic Calcic Argixerolls

Setting

Depth class: Very deep
Drainage class: Well drained

Permeability: Moderately rapid
Landform: Dissected lacustrine terraces
Parent material: Kind—unconsolidated lacustrine sediment; source—granite
Slope range: 12 to 60 percent
Elevation: 2,300 to 3,500 feet
Climatic data (average annual):
Precipitation—12 to 13 inches
Air temperature—48 to 51 degrees F
Frost-free period—140 to 150 days

Typical Pedon Description

A—0 to 10 inches; grayish brown (10YR 5/2) coarse sandy loam, very dark grayish brown (10YR 3/2) moist; weak very fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine roots; many very fine irregular pores; neutral (pH 6.7); clear smooth boundary.
Bt—10 to 26 inches; brown (10YR 5/3) coarse sandy loam, dark brown (10YR 3/3) moist, pale brown (10YR 6/3) crushed; weak coarse subangular blocky structure parting to weak very fine granular; soft, very friable, slightly sticky and slightly plastic; common very fine roots; many fine irregular pores; few faint clay films on faces of peds and in pores; neutral (pH 6.8); clear smooth boundary.
Bk—26 to 43 inches; pale brown (10YR 6/3) coarse sandy loam, dark brown (10YR 3/3) moist; single grain; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; few very fine roots; many fine irregular pores; slightly effervescent; neutral (pH 6.8); gradual smooth boundary.
C—43 to 60 inches; very pale brown (10YR 7/3) coarse sand, brown (10YR 5/3) moist; single grain; loose, nonsticky and nonplastic; many fine irregular pores; neutral (pH 7.2).

Typical Pedon Location

Map unit in which located: Payette-Van Dusen association, 30 to 60 percent slopes
Location in survey area: About 9 miles southeast of Weiser; 1,650 feet south and 700 feet east of the northwest corner of sec. 32, T. 10 N., R. 4 W.

Range in Characteristics

A horizon:
Value—4 or 5 dry, 2 or 3 moist
Chroma—1 or 2 dry or moist

Bt horizon:
Value—5 or 6 dry, 4 or 5 moist
Chroma—2 or 3 dry or moist
Texture—loam, coarse sandy loam, or gravelly coarse sandy loam

Bk horizon:
Value—5 or 6 dry, 4 or 5 moist
Chroma—3 or 4 dry or moist
Reaction—neutral or slightly alkaline

Power Series

Taxonomic class: Fine-silty, mixed, mesic Xerollic Haplargids

Setting

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Landform: Stream terraces
Parent material: Kind—alluvium and loess; source—mixed
Slope range: 0 to 8 percent
Elevation: 2,100 to 2,500 feet
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—50 to 52 degrees F
Frost-free period—150 to 155 days

Typical Pedon Description

Ap—0 to 12 inches; light brownish gray (10YR 6/2) silt loam, dark grayish brown (10YR 4/2) moist; moderate thin platy structure in upper 1 inch and moderate fine subangular blocky in lower part; slightly hard, very friable, slightly sticky and slightly plastic; many fine and very fine roots; many very fine tubular pores; neutral (pH 6.8); abrupt smooth boundary.
BAt—12 to 19 inches; pale brown (10YR 6/3) silt loam, dark brown (10YR 4/3) moist; moderate fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common fine and very fine roots; many very fine tubular pores; mildly alkaline (pH 7.4); clear smooth boundary.
Bt—19 to 31 inches; yellowish brown (10YR 5/4) silty clay loam, dark yellowish brown (10YR 3/4) moist; moderate medium prismatic structure parting to strong medium subangular blocky; very hard, friable, sticky and plastic; few fine and very fine roots; many very fine tubular pores; many distinct clay films; slightly effervescent in lower part; mildly alkaline (pH 7.6); clear smooth boundary.
Bk1—31 to 39 inches; very pale brown (10YR 7/4) silt

loam, yellowish brown (10YR 5/4) moist; massive; slightly hard, friable, sticky and slightly plastic; few very fine tubular pores; strongly effervescent; moderately alkaline (pH 7.9); clear smooth boundary.

Bk2—39 to 60 inches; very pale brown (10YR 7/4) silt loam, yellowish brown (10YR 5/4) moist; massive; very hard, firm, sticky and slightly plastic; few very fine tubular pores; strongly effervescent; moderately alkaline (pH 7.9).

Typical Pedon Location

Map unit in which located: Power-Purdam silt loams, 0 to 2 percent slopes

Location in survey area: About 0.1 mile north of Weiser; 1,000 feet west and 2,100 feet south of the northeast corner of sec. 30, T. 11 N., R. 5 W.

Range in Characteristics

Ap horizon:
Value—6 or 7 dry, 3 or 4 moist
Chroma—2 or 3 dry or moist

Bt horizon:
Value—5 or 6 dry, 3 or 4 moist
Chroma—3 or 4 dry or moist

Bk horizon:
Value—6 or 7 dry, 4 or 5 moist
Chroma—3 or 4 dry or moist
Calcium carbonate equivalent—15 to 30 percent

Purdam Series

Taxonomic class: Fine-silty, mixed, mesic Haploxerollic Durargids

Setting

Depth class: Moderately deep to a duripan
Drainage class: Well drained
Permeability: Moderately slow
Landform: Stream terraces
Parent material: Kind—alluvium and loess; source—mixed
Slope range: 0 to 8 percent
Elevation: 2,100 to 2,500 feet
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—50 to 52 degrees F
Frost-free period—150 to 155 days

Typical Pedon Description

A1—0 to 6 inches; light brownish gray (10YR 6/2) silt loam, very dark grayish brown (10YR 3/2) moist; moderate thin platy structure; slightly hard, friable, slightly sticky and slightly plastic; many fine and very fine roots; many very fine tubular pores; neutral (pH 6.8); abrupt smooth boundary.

A2—6 to 12 inches; light brownish gray (10YR 6/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many fine and very fine roots; many very fine tubular pores; neutral (pH 6.8); abrupt wavy boundary.

Bt1—12 to 16 inches; pale brown (10YR 6/3) silty clay loam, dark brown (10YR 3/3) moist; weak medium prismatic structure parting to moderate medium subangular blocky; hard, firm, sticky and plastic; common fine and very fine roots; many very fine tubular pores and few fine and medium tubular pores; many distinct clay films; neutral (pH 6.8); clear wavy boundary.

Bt2—16 to 22 inches; pale brown (10YR 6/3) silty clay loam, brown (10YR 4/3) moist; weak fine and medium subangular blocky structure; hard, firm, sticky and plastic; few fine roots; few fine tubular pores; few faint clay films; neutral (pH 6.8); clear smooth boundary.

Bkq—22 to 27 inches; white (10YR 8/2) silt loam, very pale brown (10YR 7/3) moist; massive; hard, firm, slightly sticky and slightly plastic; many fine tubular pores; strongly effervescent; moderately alkaline (pH 8.0); abrupt smooth boundary.

Bkqm—27 to 35 inches; pale brown (10YR 6/3) weakly cemented duripan, brown (10YR 4/3) moist; strong medium platy structure; very hard, very firm; lime in veins; strongly effervescent; moderately alkaline (pH 8.0); abrupt smooth boundary.

2C—35 to 60 inches; stratified, semiconsolidated silt, sand, and pebbles; lime in veins; moderately alkaline (pH 8.0).

Typical Pedon Location

Map unit in which located: Power-Purdam silt loams, 0 to 2 percent slopes

Location in survey area: About 0.5 mile northwest of Weiser; 700 feet east and 1,640 feet south of the northwest corner of sec. 30, T. 11 N., R. 5 W.

Range in Characteristics

Profile:
Depth to duripan—20 to 40 inches

A horizon:
Value—6 or 7 dry, 3 or 4 moist
Chroma—2 or 3 dry or moist

Bt horizon:
Value—5 or 6 dry, 3 or 4 moist
Chroma—3 or 4 dry or moist
Sodium adsorption ratio—0 to 5 percent

Reywat Series

Taxonomic class: Loamy-skeletal, mixed, mesic Lithic Argixerolls

Setting

Depth class: Shallow
Drainage class: Well drained
Permeability: Moderately slow
Landform: Foothills and mountains
Parent material: Kind—residuum; source—basalt
Slope range: 2 to 65 percent
Elevation: 2,300 to 4,500 feet
Climatic data (average annual):
Precipitation—12 to 14 inches
Air temperature—46 to 52 degrees F
Frost-free period—110 to 140 days

Typical Pedon Description

A1—0 to 3 inches; grayish brown (10YR 5/2) very stony loam, very dark grayish brown (10YR 3/2) moist; moderate medium and coarse granular structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine and fine irregular pores; 20 percent pebbles, 15 percent cobbles, and 20 percent stones; neutral (pH 6.6); clear smooth boundary.
A2—3 to 6 inches; grayish brown (10YR 5/2) very stony loam, dark brown (10YR 3/3) moist; moderate coarse granular structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; many fine irregular pores; 20 percent pebbles, 15 percent cobbles, and 20 percent stones; neutral (pH 6.6); clear wavy boundary.
Bt1—6 to 14 inches; brown (10YR 5/3) very gravelly clay loam, dark grayish brown (10YR 4/2) moist with dark yellowish brown (10YR 3/4) coating; moderate medium subangular blocky structure; hard, friable, sticky and plastic; many very fine roots; common very fine tubular pores; 40 percent pebbles and 10 percent cobbles; many distinct clay films on faces of peds; neutral (pH 6.6); clear wavy boundary.
Bt2—14 to 19 inches; brown (10YR 5/3) very gravelly clay loam, dark brown (10YR 3/3) moist with dark yellowish brown (10YR 3/4) coating; strong medium subangular blocky structure; hard, friable, sticky and plastic; common very fine roots; common very fine tubular pores; 40 percent pebbles and 10 percent cobbles; many distinct clay films on faces of peds; neutral (pH 6.6); abrupt irregular boundary.
R—19 inches; slightly weathered basalt; slightly effervescent on surfaces and in cracks.

Typical Pedon Location

Map unit in which located: Gem-Reywat complex, 30 to 65 percent slopes
Location in survey area: About 10 miles northwest of Weiser; 215 feet south and 125 feet east of the northwest corner of sec. 19, T. 12 N., R. 6 W.

Range in Characteristics

Profile:
Depth to bedrock—10 to 20 inches

A horizon:
Value—4 or 5 dry, 2 or 3 moist
Chroma—2 or 3 dry or moist

Bt horizon:
Value—5 or 6 dry, 2 or 3 moist
Chroma—2 or 3 dry or moist

Riggins Series

Taxonomic class: Loamy-skeletal, mixed, mesic Lithic Ultic Argixerolls

Setting

Depth class: Shallow
Drainage class: Well drained
Permeability: Moderately slow
Landform: Foothills and mountains
Parent material: Kind—residuum; source—basalt
Slope range: 4 to 75 percent
Elevation: 2,400 to 5,000 feet
Climatic data (average annual):
Precipitation—16 to 22 inches
Air temperature—45 to 50 degrees F
Frost-free period—110 to 130 days

Typical Pedon Description

A—0 to 4 inches; dark grayish brown (10YR 4/2) extremely stony loam, very dark brown (10YR 2/2) moist; weak very fine and fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; common very fine irregular pores; 20

percent pebbles, 30 percent cobbles, and 15 percent stones; neutral (pH 6.8); clear smooth boundary.
Bt1—4 to 16 inches; brown (7.5YR 4/2) very cobbly clay loam, dark brown (7.5YR 3/2) moist; moderate very fine and fine subangular blocky structure; hard, firm, sticky and plastic; few very fine and fine roots; common very fine tubular pores; 10 percent pebbles and 45 percent cobbles; few faint clay films on faces of peds and in pores; neutral (pH 7.0); clear smooth boundary.
Bt2—16 to 19 inches; brown (7.5YR 4/2) very cobbly clay loam, dark brown (7.5YR 3/2) moist; moderate very fine and fine subangular blocky structure; slightly hard, very firm, sticky and plastic; few fine and medium roots; few very fine tubular pores; 10 percent pebbles and 45 percent cobbles; few faint clay films on faces of peds; neutral (pH 7.0); clear smooth boundary.
R—19 inches; basalt.

Typical Pedon Location

Map unit in which located: Riggins extremely stony loam, 30 to 50 percent slopes
Location in survey area: About 6 miles northwest of Cambridge; 800 feet east and 2,400 feet north of the southwest corner of sec. 13, T. 15 N., R. 4 W.

Range in Characteristics

Profile:
Depth to bedrock—10 to 20 inches
Base saturation—60 to 75 percent
Reaction—slightly acid or neutral
Rock fragment content—35 to 75 percent

A horizon:
Value—4 or 5 dry, 2 or 3 moist
Chroma—1 or 2 dry or moist

Bt horizon:
Hue—10YR or 7.5YR
Value—3 or 4 dry, 2 or 3 moist
Chroma—2 or 3 dry or moist
Clay content—27 to 35 percent

Rockly Series

Taxonomic class: Loamy-skeletal, mixed, mesic Lithic Haploxerolls

Setting

Depth class: Very shallow and shallow
Drainage class: Well drained
Permeability: Moderately slow
Landform: Foothills, mountains, and canyons
Parent material: Kind—colluvium and residuum; source—basalt
Slope range: 4 to 70 percent
Elevation: 1,800 to 4,500 feet
Climatic data (average annual):
Precipitation—16 to 20 inches
Air temperature—46 to 50 degrees F
Frost-free period—110 to 120 days

Typical Pedon Description

A—0 to 3 inches; brown (10YR 5/3) extremely stony loam, dark brown (10YR 3/3) moist; weak fine granular structure; slightly hard, friable, nonsticky and nonplastic; many very fine roots; many very fine irregular pores; 40 percent pebbles, 10 percent cobbles, and 15 percent stones; neutral (pH 6.8); clear wavy boundary.
B2—3 to 8 inches; yellowish brown (10YR 5/4) very gravelly clay loam, dark yellowish brown (10YR 3/4) moist; weak medium subangular blocky structure; slightly hard, firm, slightly sticky and slightly plastic; common very fine roots; many very fine tubular pores; 35 percent pebbles, 10 percent cobbles, and 10 percent stones; neutral (pH 6.7); abrupt wavy boundary.
R—8 inches; basalt.

Typical Pedon Location

Map unit in which located: Rockly-Riggins complex, 4 to 30 percent slopes
Location in survey area: About 5 miles northeast of Cambridge; 2,100 feet west and 500 feet south of the northeast corner of sec. 28, T. 15 N., R. 2 W.

Range in Characteristics

Profile:
Thickness of mollic epipedon—4 to 10 inches
Depth to bedrock—5 to 12 inches

A horizon:
Value—4 or 5 dry, 2 or 3 moist
Chroma—2 or 3 dry or moist

B2 horizon:
Value—3 to 5 dry, 2 or 3 moist
Chroma—3 or 4 dry or moist
Rock fragment content—40 to 75 percent
Clay content—20 to 30 percent

Roseberry Series

Taxonomic class: Sandy, mixed Humic Cryaquepts

Setting

Depth class: Very deep

Drainage class: Poorly drained
Permeability: Moderately rapid
Landform: Outwash terraces
Parent material: Kind—glacial outwash; source—granite
Slope range: 0 to 2 percent
Elevation: 3,800 to 4,800 feet
Climatic data (average annual):
Precipitation—22 to 24 inches
Air temperature—38 to 43 degrees F
Frost-free period—60 to 80 days

Typical Pedon Description

Ap—0 to 4 inches; very dark gray (10YR 3/1) loam, black (2.5YR 2/0) moist; weak fine granular structure; slightly hard, very friable, slightly sticky and slightly plastic; common fine roots and few coarse roots; many very fine irregular pores; moderately acid (pH 6.0); abrupt smooth boundary.

A—4 to 18 inches; very dark gray (10YR 3/1) loam, black (2.5YR 2/0) moist; weak fine subangular blocky structure parting to weak fine granular; slightly hard, very friable, slightly sticky and slightly plastic; common fine roots and few coarse roots; many very fine irregular pores; moderately acid (pH 6.0); abrupt smooth boundary.

C1—18 to 26 inches; light yellowish brown (10YR 6/2) loam, dark brown (10YR 3/3) moist; common fine distinct dark brown (7.5YR 4/4) mottles; weak medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; few fine roots; many very fine irregular pores; moderately acid (pH 5.8); gradual wavy boundary.

C2—26 to 33 inches; pale brown (10YR 6/3) loamy sand, dark yellowish brown (10YR 3/4) moist; many medium distinct strong brown (7.5YR 5/6) mottles; single grain; loose, nonsticky and nonplastic; few fine roots; many very fine irregular pores; moderately acid (pH 5.6); gradual wavy boundary.

C3—33 to 40 inches; pale brown (10YR 6/3) loamy coarse sand, dark yellowish brown (10YR 3/4) moist; many medium distinct strong brown (7.5YR 5/6) mottles; single grain; loose, nonsticky and nonplastic; many very fine irregular pores; moderately acid (pH 5.6); clear smooth boundary.

C4—40 to 55 inches; dark gray (10YR 4/1) sandy loam, very dark gray (10YR 3/3) moist; massive; slightly hard, very friable, nonsticky and nonplastic; many very fine irregular pores; moderately acid (pH 5.6); clear smooth boundary.

C5—55 to 60 inches; dark grayish brown (10YR 4/2) gravelly sand, very dark grayish brown (10YR 3/2) moist; single grain; loose, nonsticky and nonplastic; many very fine irregular pores; moderately acid (pH 5.6).

Typical Pedon Location

Map unit in which located: Roseberry loam, 0 to 2 percent slopes
Location in survey area: About 0.5 mile northeast of New Meadows; 100 feet south and 250 feet west of the northeast corner of sec. 24, T. 19 N., R. 1 E.

Range in Characteristics

Profile:
Base saturation—25 to 50 percent

A horizon:
Value—3 to 5 dry, 2 or 3 moist
Chroma—less than 2 dry or moist

C horizon:
Reaction—moderately acid or strongly acid

Saralegui Series

Taxonomic class: Coarse-loamy, mixed, mesic Xerollic Haplargids

Setting

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Landform: Lacustrine terraces
Parent material: Kind—alluvium; source—granite
Slope range: 30 to 60 percent
Elevation: 2,300 to 2,800 feet
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—48 to 50 degrees F
Frost-free period—130 to 145 days

Typical Pedon Description

A—0 to 3 inches; light brownish gray (10YR 6/2) sandy loam, dark grayish brown (10YR 4/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine roots; many fine irregular pores; slightly acid (pH 6.2); clear smooth boundary.

BA—3 to 13 inches; light brownish gray (10YR 6/2) sandy loam, dark grayish brown (10YR 4/2) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine roots; many fine irregular pores; neutral (pH 6.6); gradual smooth boundary.

Bt1—13 to 27 inches; light brownish gray (10YR 6/2) sandy loam, dark grayish brown (10YR 4/2) moist; moderate medium subangular blocky structure; very hard, firm, slightly sticky and slightly plastic; common very fine roots; common very fine tubular and irregular pores; common faint clay films on vertical faces of peds; neutral (pH 6.6); clear smooth boundary.

Bt2—27 to 41 inches; light brownish gray (10YR 6/2) sandy loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; very hard, firm, slightly sticky and slightly plastic; common very fine roots; few very fine tubular and irregular pores; few faint clay films on vertical faces of peds; neutral (pH 6.8); clear smooth boundary.

BC—41 to 60 inches; light brownish gray (10YR 6/2) sandy loam, brown (10YR 4/3) moist; weak coarse subangular blocky structure; very hard, firm, slightly sticky and slightly plastic; few very fine roots; many very fine irregular pores; neutral (pH 7.0).

Typical Pedon Location

Map unit in which located: Lolalita-Saralegui complex, 30 to 60 percent slopes

Location in survey area: About 8 miles southeast of Weiser; 1,620 feet south and 40 feet east of the northwest corner of sec. 31, T. 10 N., R. 4 W.

Range in Characteristics

A horizon:
Chroma—1 or 2 dry or moist

Bt horizon:
Value—6 or 7 dry, 4 or 5 moist

Shellrock Series

Taxonomic class: Mixed, frigid Typic Xeropsamments

Setting

Depth class: Deep
Drainage class: Somewhat excessively drained
Permeability: Rapid
Landform: Mountains
Parent material: Kind—residuum; source—granite and quartz-diorite
Slope range: 12 to 60 percent
Elevation: 4,200 to 6,000 feet
Climatic data (average annual):
Precipitation—24 to 30 inches
Air temperature—38 to 42 degrees F
Frost-free period—70 to 90 days

Typical Pedon Description

A1—0 to 3 inches; dark grayish brown (10YR 4/2) loamy coarse sand, very dark brown (10YR 2/2) moist; weak very fine and fine granular structure; loose, very friable, nonsticky and nonplastic; common fine roots and few coarse roots; many very fine irregular pores; slightly acid (pH 6.4); abrupt smooth boundary.

A2—3 to 10 inches; dark grayish brown (10YR 4/2) loamy coarse sand, very dark grayish brown (10YR 3/2) moist; loose, very friable, nonsticky and nonplastic; few very fine roots and common fine roots; many very fine irregular pores; neutral (pH 6.6); clear smooth boundary.

C1—10 to 31 inches; brown (10YR 5/3) loamy coarse sand, dark brown (10YR 4/3) moist; massive; loose, very friable, nonsticky and nonplastic; few very fine roots and common coarse roots; many very fine irregular pores; neutral (pH 6.6); gradual smooth boundary.

C2—31 to 42 inches; pale brown (10YR 6/3) gravelly loamy coarse sand, dark brown (10YR 4/3) moist; single grain; loose, nonsticky and nonplastic; many fine and coarse pores; 15 percent pebbles; slightly acid (pH 6.2); gradual smooth boundary.

Cr—42 inches; weathered granite.

Typical Pedon Location

Map unit in which located: Shellrock-Rock outcrop complex, 35 to 60 percent slopes

Location in survey area: About 6 miles east of New Meadows; 1,000 feet south and 50 feet west of the northeast corner of sec. 28, T. 19 N., R. 2 E.

Range in Characteristics

Profile:
Depth to paralithic contact—40 to 60 inches

A horizon:
Value—4 or 5 dry, 2 or 3 moist
Chroma—2 or 3 dry or moist

C horizon:
Value—5 to 8 dry, 4 to 6 moist
Chroma—2 to 4 dry or moist

Shoepeg Series

Taxonomic class: Fine-loamy, mixed, mesic Cumulic Haploxerolls

Setting

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderate
Landform: Stream terraces
Parent material: Kind—alluvium; source—mixed
Slope range: 0 to 3 percent
Elevation: 2,200 to 3,500 feet
Climatic data (average annual):
Precipitation—14 to 18 inches
Air temperature—50 to 54 degrees F
Frost-free period—130 to 150 days

Typical Pedon Description

A1—0 to 10 inches; very dark grayish brown (10YR 3/2) loam, very dark brown (10YR 2/2) moist; moderate fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine irregular pores; neutral (pH 7.0); clear smooth boundary.
A2—10 to 21 inches; very dark grayish brown (10YR 3/2) loam, very dark brown (10YR 2/2) moist; moderate very fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; many very fine irregular pores; neutral (pH 6.8); clear smooth boundary.
A3—21 to 29 inches; dark grayish brown (10YR 4/2) loam, very dark brown (10YR 2/2) moist; moderate very fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; many very fine irregular pores; neutral (pH 6.8); abrupt smooth boundary.
C1—29 to 48 inches; dark brown (10YR 3/3) silt loam, very dark brown (10YR 2/2) moist; many fine prominent strong brown (7.5YR 4/6) mottles; massive; slightly hard, friable, slightly sticky and slightly plastic; few fine roots; many very fine tubular pores; neutral (pH 6.8); abrupt smooth boundary.
2C2—48 to 60 inches; brown (10YR 5/3) gravelly sandy loam, very dark grayish brown (10YR 3/2) moist; single grain; slightly hard, loose, nonsticky and nonplastic; many very fine irregular pores; neutral (pH 6.8).

Typical Pedon Location

Map unit in which located: Shoepeg loam, 0 to 3 percent slopes
Location in survey area: About 0.5 mile northeast of Cambridge; 1,150 feet north and 900 feet west of the southeast corner of sec. 2, T. 14 N., R. 3 W.

Range in Characteristics

Profile:
Thickness of mollic epipedon—20 to 60 inches
Depth to mottles—20 to 36 inches

A horizon:
Value—3 to 5 dry, 2 or 3 moist
Chroma—1 or 2 dry or moist
Reaction—neutral or mildly alkaline

C horizon:
Hue—2.5Y or 10YR
Value—4 to 6 dry, 2 to 4 moist
Chroma—2 or 3 dry or moist
Texture—loam, silt loam, or clay loam

2C horizon:
Hue—2.5Y or 10YR
Value—5 or 6 dry, 3 or 4 moist
Chroma—1 to 3 dry or moist
Texture—gravelly sandy loam, sandy loam, silt loam, or loamy coarse sand

Starveout Series

Taxonomic class: Fine-loamy, mixed, mesic Pachic Palexerolls

Setting

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Landform: Foothills, mountains, and canyons
Parent material: Kind—alluvium and loess; source—basalt
Slope range: 3 to 45 percent
Elevation: 1,800 to 3,600 feet
Climatic data (average annual):
Precipitation—16 to 20 inches
Air temperature—46 to 48 degrees F
Frost-free period—120 to 140 days

Typical Pedon Description

A—0 to 3 inches; grayish brown (10YR 5/2) loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure parting to moderate medium granular; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine and fine tubular pores and few medium tubular pores; neutral (pH 7.0); clear smooth boundary.
Bt1—3 to 11 inches; dark grayish brown (10YR 4/2)

clay loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure; hard, friable, sticky and plastic; many very fine and fine roots; many very fine and fine tubular pores and few medium tubular pores; common faint clay films on faces of peds and in pores; neutral (pH 7.2); clear smooth boundary.

Bt2—11 to 21 inches; dark yellowish brown (10YR 4/4) clay loam, dark brown (7.5YR 3/2) moist; strong medium subangular blocky structure; hard, friable, very sticky and plastic; common very fine and fine roots; many very fine and fine tubular pores; common faint to distinct clay films on faces of peds and in pores; neutral (pH 7.2); gradual smooth boundary.

Bt3—21 to 36 inches; brown (7.5YR 4/4) clay loam, dark brown (7.5YR 3/2) moist; strong medium subangular blocky structure; very hard, firm, very sticky and very plastic; few very fine and fine roots; common very fine and fine tubular pores; common faint to distinct clay films on faces of peds and in pores; mildly alkaline (pH 7.4); gradual smooth boundary.

Bt4—36 to 60 inches; strong brown (7.5YR 4/6) clay loam, reddish brown (5YR 4/4) moist; moderate medium and coarse subangular blocky structure; very hard, firm, very sticky and very plastic; common very fine tubular pores and few fine tubular pores; few faint clay films on faces of peds; mildly alkaline (pH 7.4).

Typical Pedon Location

Map unit in which located: Rockly-Starveout-McDaniel association, 3 to 70 percent slopes

Location in survey area: About 3.5 miles south of Oxbow Dam; 4,000 feet east and 2,800 feet south of the northwest corner of sec. 9, T. 19 N., R. 4 W.

Range in Characteristics

Profile:

Thickness of mollic epipedon—20 to 36 inches
Depth to abrupt textural change—2 to 4 inches
Particle-size control section—averages 30 to 35 percent clay

A horizon:

Value—4 or 5 dry, 2 or 3 moist
Chroma—2 or 3 dry or moist

Bt horizon:

Hue—10YR to 5YR
Value—4 or 5 dry, 3 or 4 moist
Chroma—2 to 6 dry or moist

Clay content—30 to 45 percent

Sudpeak Series

Taxonomic class: Fine, montmorillonitic Argic Pachic Cryoborolls

Setting

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Slow
Landform: Alluvial fans
Parent material: Kind—alluvium; source—basalt
Slope range: 3 to 20 percent
Elevation: 3,800 to 4,200 feet
Climatic data (average annual):
Precipitation—22 to 25 inches
Air temperature—36 to 40 degrees F
Frost-free period—50 to 80 days

Typical Pedon Description

A1—0 to 8 inches; dark grayish brown (10YR 4/2) loam, very dark brown (10YR 2/2) moist; moderate medium and fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine irregular pores; slightly acid (pH 6.2); gradual wavy boundary.

A2—8 to 18 inches; dark grayish brown (10YR 4/2) loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure parting to moderate fine and medium granular; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; common very fine tubular pores; slightly acid (pH 6.2); clear wavy boundary.

AB—18 to 28 inches; brown (10YR 4/3) clay loam, very dark grayish brown (10YR 3/2) moist; moderate medium and coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots and common coarse roots; common very fine tubular pores; gravel line; slightly acid (pH 6.2); clear smooth boundary.

Bt—28 to 40 inches; brown (10YR 5/3) silty clay loam, dark brown (10YR 3/3) moist; strong medium and coarse subangular blocky structure; hard, firm, sticky and plastic; few very fine and coarse roots; few fine tubular pores; many prominent clay films; neutral (pH 6.8); clear smooth boundary.

Cg—40 to 60 inches; light yellowish brown (10YR 6/4) silty clay loam, dark brown (10YR 4/3) moist; many distinct yellowish brown (10YR 5/6) mottles; strong

medium and coarse subangular blocky structure; hard, firm, sticky and plastic; few coarse roots; few very fine tubular pores; neutral (pH 6.6).

Typical Pedon Location

Map unit in which located: Sudpeak loam, 3 to 20 percent slopes
Location in survey area: About 7 miles southeast of New Meadows; 800 feet east and 1,600 feet north of the southwest corner of sec. 33, T. 19 N., R. 2 E.

Range in Characteristics

Profile:
Thickness of mollic epipedon—18 to 50 inches
Depth to water table—36 to 60 inches

A and AB horizons:
Value—4 or 5 dry, 2 or 3 moist
Chroma—1 or 2 dry or moist

Bt horizon:
Value—4 or 5 dry, 2 or 3 moist
Chroma—2 or 3 dry or moist
Texture—silty clay loam or clay

Cg horizon:
Value—5 to 7 dry, 3 to 5 moist
Chroma—2 to 4 dry or moist
Texture—silty clay loam or clay

Suttler Series

Taxonomic class: Coarse-loamy, mixed Typic Cryumbrepts

Setting

Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Landform: Mountains
Parent material: Kind—residuum; source—mica schist
Slope range: 40 to 60 percent
Elevation: 4,000 to 5,200 feet
Climatic data (average annual):
Precipitation—30 to 36 inches
Air temperature—38 to 44 degrees F
Frost-free period—60 to 80 days

Typical Pedon Description

Oi—2 inches to 1 inch; undecomposed needles, leaves, cones, and twigs.
Oe—1 inch to 0; moderately decomposed needles, leaves, cones, and twigs.
A—0 to 4 inches; grayish brown (10YR 5/2) loam, very dark brown (10YR 2/2) moist; weak very fine and fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; 1 percent pebbles; moderately acid (pH 6.0); abrupt wavy boundary.
Bt1—4 to 15 inches; brown (10YR 5/3) loam, dark brown (10YR 3/3) moist; weak medium and coarse subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many fine and coarse roots; many very fine irregular pores; 1 percent pebbles; few faint clay films on faces of peds; strongly acid (pH 5.5); gradual wavy boundary.
Bt2—15 to 45 inches; pale brown (10YR 6/3) fine sandy loam, dark brown (10YR 3/3) moist; weak medium and coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few fine roots; common very fine tubular pores; 10 percent pebbles; common faint clay films on faces of peds; one 5-millimeter-thick clayey lamella; strongly acid (pH 5.5); gradual wavy boundary.
Cr—45 inches; weathered mica schist.

Typical Pedon Location

Map unit in which located: Jughandle-Suttler association, 40 to 90 percent slopes
Location in survey area: About 8 miles north of New Meadows; 1,150 feet north and 2,350 feet east of the southwest corner of sec. 12, T. 20 N., R. 1 E.

Range in Characteristics

Profile:
Depth to paralithic contact—40 to 60 inches
Thickness of umbric epipedon—10 to 15 inches

A horizon:
Hue—10YR or 7.5YR

Bt horizon:
Hue—10YR or 7.5YR
Base saturation—40 to 60 percent

Swede Series

Taxonomic class: Fine-loamy, mixed Argic Cryoborolls

Setting

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Landform: Alluvial fans

Parent material: Kind—alluvium; source—basalt and granite
Slope range: 4 to 12 percent
Elevation: 4,100 to 5,200 feet
Climatic data (average annual):
Precipitation—24 to 27 inches
Air temperature—39 to 43 degrees F
Frost-free period—60 to 75 days

Typical Pedon Description

Ap—0 to 6 inches; brown (10YR 4/3) loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure parting to moderate very fine and fine granular; soft, friable, slightly sticky and slightly plastic; many very fine roots and common fine roots; many very fine and fine irregular and tubular pores; slightly acid (pH 6.2); abrupt smooth boundary.

A—6 to 13 inches; brown (10YR 4/3) loam, dark brown (10YR 3/3) moist; moderate medium and coarse subangular blocky structure; hard, firm, slightly sticky and slightly plastic; many very fine roots and few fine roots; many very fine and fine irregular and tubular pores; slightly acid (pH 6.2); clear smooth boundary.

Bt1—13 to 24 inches; brown (10YR 4/3) loam, dark yellowish brown (10YR 3/4) moist; moderate medium and coarse subangular blocky structure; slightly hard, firm, slightly sticky and slightly plastic; many very fine roots and few fine roots; many very fine and fine irregular and tubular pores; common faint clay films on faces of peds and in pores; slightly acid (pH 6.2); clear smooth boundary.

Bt2—24 to 40 inches; brown (7.5YR 4/4) clay loam, dark brown (7.5YR 3/4) moist; moderate medium prismatic structure parting to moderate medium and coarse subangular blocky; hard, firm, sticky and plastic; many very fine roots and few fine roots; many very fine and fine irregular and tubular pores; many distinct clay films on faces of peds and in pores; slightly acid (pH 6.4); abrupt smooth boundary.

Bt3—40 to 52 inches; light yellowish brown (10YR 6/4) clay loam, dark yellowish brown (10YR 4/4) moist; weak medium and coarse prismatic structure parting to moderate fine subangular blocky; hard, firm, sticky and plastic; common very fine roots and few fine roots; many very fine and fine irregular pores and common medium irregular pores; many prominent clay films on faces of peds and in pores; slightly acid (pH 6.4); clear smooth boundary.

Bt4—52 to 60 inches; yellowish brown (10YR 5/4) gravelly clay loam, dark yellowish brown (10YR 3/4) moist; moderate medium and strong fine subangular blocky structure; hard, firm, sticky and plastic; common very fine roots; many very fine and fine irregular and tubular pores; 15 percent pebbles and 5 percent cobbles; common faint clay films on faces of peds and in pores; slightly acid (pH 6.4).

Typical Pedon Location

Map unit in which located: Swede loam, 4 to 12 percent slopes
Location in survey area: About 3 miles northeast of New Meadows; 1,340 feet north and 80 feet west of the southeast corner of sec. 8, T. 19 N., R. 2 E.

Range in Characteristics

Ap and A horizons:
Value—4 or 5 dry, 2 or 3 moist
Chroma—2 or 3 dry or moist

Bt horizon:
Hue—10YR or 7.5YR
Value—4 to 7 dry, 3 or 4 moist
Chroma—3 or 4 dry or moist

Tamred Series

Taxonomic class: Loamy-skeletal, mixed Mollic Cryoboralfs

Setting

Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderately slow
Landform: Mountains
Parent material: Kind—residuum; source—basalt
Slope range: 20 to 60 percent
Elevation: 4,600 to 5,300 feet
Climatic data (average annual):
Precipitation—25 to 35 inches
Air temperature—38 to 42 degrees F
Frost-free period—60 to 80 days

Typical Pedon Description

Oi—2 inches to 0; needles, twigs, and cones.

A—0 to 3 inches; reddish brown (5YR 4/3) loam, dark reddish brown (5YR 3/3) moist; weak very fine and fine granular structure; soft, loose, nonsticky and nonplastic; many very fine roots; many very fine irregular pores; moderately acid (pH 6.0); abrupt smooth boundary.

AB—3 to 7 inches; reddish brown (5YR 4/4) gravelly loam, reddish brown (5YR 4/3) moist; moderate fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots and few medium roots; few very fine tubular pores; 25 percent pebbles; moderately acid (pH 6.0); clear smooth boundary.
Bt—7 to 21 inches; yellowish red (5YR 4/6) extremely cobbly clay loam, dark reddish brown (5YR 3/4) moist; moderate medium subangular blocky structure; slightly hard, firm, sticky and plastic; many very fine roots and few coarse roots; few very fine tubular pores; 80 percent cobbles; very few faint clay films on faces of peds and in pores; moderately acid (pH 6.0); clear wavy boundary.
R1—21 to 30 inches; fractured basalt; many roots in cracks; cracks more than 10 inches apart; clear irregular boundary.
R2—30 inches; basalt.

Typical Pedon Location

Map unit in which located: Tamred loam, 20 to 60 percent slopes
Location in survey area: About 2 miles southwest of Tamarack; 2,400 feet north and 350 feet west of the southeast corner of sec. 35, T. 19 N., R. 1 W.

Range in Characteristics

Profile:
Depth to bedrock—20 to 40 inches

A horizon:
Value—3 or 4 dry, 2 or 3 moist
Chroma—2 or 3 dry or moist

Bt horizon:
Hue—5YR or 2.5YR
Chroma—4 to 6 dry or moist
Rock fragment content—60 to 85 percent
Texture—extremely gravelly clay loam or extremely cobbly clay loam

Ticanot Series

Taxonomic class: Clayey-skeletal, montmorillonitic Argic Lithic Cryoborolls

Setting

Depth class: Shallow
Drainage class: Well drained
Permeability: Slow
Landform: Mountains
Parent material: Kind—residuum; source—basalt
Slope range: 4 to 65 percent
Elevation: 3,800 to 6,000 feet
Climatic data (average annual):
Precipitation—22 to 26 inches
Air temperature—38 to 42 degrees F
Frost-free period—65 to 75 days

Typical Pedon Description

A—0 to 5 inches; brown (10YR 5/3) very cobbly loam, very dark grayish brown (10YR 3/2) moist; moderate very fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many fine and very fine roots; many very fine irregular pores; 40 percent cobbles; slightly acid (pH 6.4); clear wavy boundary.
AB—5 to 11 inches; brown (10YR 5/3) very cobbly clay loam, dark brown (10YR 3/3) moist; moderate fine subangular blocky structure parting to strong fine and very fine granular; slightly hard, friable, sticky and plastic; many very fine roots; many very fine irregular pores; 50 percent cobbles; neutral (pH 6.6); clear wavy boundary.
Bt—11 to 15 inches; dark brown (10YR 4/3) very cobbly clay, dark brown (7.5YR 3/2) moist; strong very fine subangular blocky structure; very hard, firm, very sticky and very plastic; many very fine roots; common very fine tubular pores; 50 percent cobbles; many prominent clay films; neutral (pH 6.6); gradual smooth boundary.
R—15 inches; fractured basalt; clay in cracks.

Typical Pedon Location

Map unit in which located: Ticanot very cobbly loam, 4 to 65 percent slopes
Location in survey area: About 0.1 mile north of New Meadows; 760 feet south and 250 feet east of the northwest corner of sec. 24, T. 19 N., R. 1 E.

Range in Characteristics

Profile:
Depth to bedrock—10 to 20 inches

A horizon:
Value—4 or 5 dry, 2 or 3 moist
Chroma—1 to 3 dry or moist

Bt horizon:
Value—4 to 6 dry, 3 or 4 moist

Chroma—2 to 4 dry or moist
Rock fragment content—35 to 50 percent

Tindahay Series

Taxonomic class: Sandy, mixed, mesic Xeric Torriorthents

Setting

Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability: Moderately rapid
Landform: Fan terraces
Parent material: Kind—alluvium and eolian sand; source—mixed
Slope range: 2 to 12 percent
Elevation: 2,100 to 2,500 feet
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—50 to 52 degrees F
Frost-free period—150 to 155 days

Typical Pedon Description

Ap—0 to 10 inches; brown (10YR 5/3) loamy coarse sand, dark brown (10YR 3/3) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine roots; many very fine irregular pores; neutral (pH 6.8); abrupt smooth boundary.

C1—10 to 12 inches; pale brown (10YR 6/3) loamy coarse sand, pale brown (10YR 6/3) moist; single grain; loose, nonsticky and nonplastic; many very fine and fine roots; many very fine irregular pores; 2 percent pebbles; neutral (pH 6.9); abrupt smooth boundary.

C2—12 to 17 inches; brown (10YR 5/3) sandy loam, dark brown (10YR 3/3) moist; weak coarse subangular blocky structure; soft, very friable, nonsticky and nonplastic; many fine roots and few coarse roots; common fine tubular pores; neutral (pH 7.0); abrupt smooth boundary.

C3—17 to 28 inches; pale brown (10YR 6/3) loamy coarse sand, brown (10YR 4/3) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine and fine roots; many fine irregular pores; neutral (pH 7.2); clear smooth boundary.

C4—28 to 60 inches; pale brown (10YR 6/3) coarse sand, pale brown (10YR 6/3) moist; single grain; loose, nonsticky and nonplastic; few fine roots; many fine and medium irregular pores; neutral (pH 7.0).

Typical Pedon Location

Map unit in which located: Tindahay-Cashmere complex, 4 to 8 percent slopes
Location in survey area: About 7 miles southeast of Weiser; 1,450 feet west and 760 feet north of the southeast corner of sec. 36, T. 10 N., R. 3 W.

Range in Characteristics

A horizon:
Value—5 or 6 dry, 3 or 4 moist
Chroma—2 or 3 dry or moist

Typic Xerofluvents

Setting

Depth class: Very deep
Drainage class: Excessively drained
Permeability: Very rapid
Landform: Stream terraces
Parent material: Kind—alluvium; source—granite and basalt
Slope range: 4 to 40 percent
Elevation: 2,800 to 3,000 feet
Climatic data (average annual):
Precipitation—24 to 28 inches
Air temperature—42 to 48 degrees F
Frost-free period—80 to 120 days

Sample Pedon Description

A—0 to 10 inches; light brownish gray (10YR 6/2) extremely cobbly sand, dark grayish brown (10YR 4/2) moist; single grain; loose, nonsticky and nonplastic; many very fine roots; many very fine, fine, and coarse irregular pores; 70 percent cobbles; neutral (pH 6.6); gradual irregular boundary.

C—10 to 60 inches; multicolored, stratified cobbles, pebbles, and sand with some fine-textured material; single grain; loose, nonsticky and nonplastic; few very fine, fine, and coarse roots; many medium and coarse irregular pores; mildly alkaline (pH 7.4).

Sample Pedon Location

Map unit in which located: Typic Xerofluvents, cobbly, 4 to 40 percent slopes
Location in survey area: About 20 miles north of New Meadows; 500 feet south and 3,300 feet east of the northwest corner of sec. 9, T. 22 N., R. 1 E.

Range in Characteristics

Profile:
Kind and amount of rock fragments—highly variable

Van Dusen Series

Taxonomic class: Fine-loamy, mixed, mesic Pachic Argixerolls

Setting

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Landform: Lacustrine terraces
Parent material: Kind—unconsolidated sediment; source—granite
Slope range: 30 to 65 percent
Elevation: 2,400 to 3,500 feet
Climatic data (average annual):
Precipitation—12 to 14 inches
Air temperature—45 to 49 degrees F
Frost-free period—130 to 140 days

Typical Pedon Description

A1—0 to 7 inches; dark grayish brown (10YR 4/2) loam, very dark brown (10YR 2/2) moist; weak very fine granular structure; soft, friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine and fine irregular pores; neutral (pH 6.8); clear smooth boundary.
A2—7 to 14 inches; dark grayish brown (10YR 4/2) loam, very dark brown (10YR 2/2) moist; weak medium subangular blocky structure parting to moderate fine granular; soft, friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine and fine irregular pores; neutral (pH 6.6); clear smooth boundary.
BAt—14 to 20 inches; dark grayish brown (10YR 4/2) loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure; slightly hard, firm, sticky and plastic; common very fine roots; common very fine tubular pores; few faint clay films on faces of peds; neutral (pH 6.6); clear smooth boundary.
Bt—20 to 24 inches; grayish brown (10YR 5/2) sandy clay loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure; slightly hard, firm, sticky and plastic; common very fine roots; common very fine tubular pores; many faint clay films on faces of peds; slightly acid (pH 6.4); clear wavy boundary.
BCt—24 to 32 inches; brown (10YR 5/3) sandy clay loam, very dark grayish brown (10YR 3/2) moist; weak fine and medium subangular blocky structure; slightly hard, firm, slightly sticky and slightly plastic; common very fine roots; common very fine tubular pores; few faint clay films on faces of peds; slightly acid (pH 6.4); clear wavy boundary.
C1—32 to 48 inches; brown (10YR 5/3) loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; slightly hard, firm, slightly sticky and slightly plastic; few fine roots; common very fine tubular pores; neutral (pH 6.8); gradual wavy boundary.
C2—48 to 60 inches; brown (10YR 5/3) sandy loam, brown (10YR 4/3) moist; massive; slightly hard, firm, slightly sticky and slightly plastic; common very fine tubular pores; neutral (pH 6.8).

Typical Pedon Location

Map unit in which located: Payette-Van Dusen association, 30 to 60 percent slopes
Location in survey area: About 8 miles southeast of Weiser; 2,000 feet south and 1,720 feet west of the northeast corner of sec. 31, T. 10 N., R. 4 W.

Range in Characteristics

Profile:
Thickness of mollic epipedon—20 to 32 inches
Reaction—slightly acid to mildly alkaline

A horizon:
Value—4 or 5 dry, 2 or 3 moist
Chroma—1 or 2 dry or moist

Bt horizon:
Value—5 or 6 dry, 3 or 4 moist
Chroma—2 or 3 dry or moist
Texture—clay loam or sandy clay loam

Vickery Series

Taxonomic class: Fine-loamy, mixed, mesic Xerollic Durorthids

Setting

Depth class: Moderately deep to a duripan
Drainage class: Well drained
Permeability: Moderate
Landform: Fan terraces
Parent material: Kind—loess over alluvium; source—granite
Slope range: 4 to 12 percent
Elevation: 2,400 to 3,000 feet
Climatic data (average annual):
Precipitation—10 to 12 inches
Air temperature—49 to 52 degrees F
Frost-free period—150 to 155 days

Typical Pedon Description

Ap—0 to 10 inches; pale brown (10YR 6/3) silt loam, brown (10YR 4/3) moist; weak medium granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral (pH 6.8); abrupt smooth boundary.

BA—10 to 23 inches; pale brown (10YR 6/3) silt loam, brown (10YR 4/3) moist; weak coarse prismatic structure parting to weak very fine subangular blocky; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; many very fine tubular pores; few faint clay films; mildly alkaline (pH 7.4); clear wavy boundary.

Bk—23 to 38 inches; light gray (10YR 7/2) silt loam, brown (10YR 5/3) moist; weak coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; many very fine tubular pores; strongly effervescent; mildly alkaline (pH 7.6); abrupt wavy boundary.

Bqkm—38 to 42 inches; white (10YR 8/2) indurated duripan, very pale brown (10YR 7/3) moist; massive; mildly alkaline (pH 7.6); abrupt wavy boundary.

2C—42 to 60 inches; pale brown (10YR 6/3) coarse sand, brown (10YR 4/3) moist; single grain; loose, nonsticky and nonplastic; moderately alkaline (pH 8.4).

Typical Pedon Location

Map unit in which located: Chilcott-Vickery silt loams, 4 to 12 percent slopes
Location in survey area: About 7 miles southeast of Weiser; 1,950 feet west and 1,650 feet north of the southeast corner of sec. 30, T. 10 N., R. 4 W.

Range in Characteristics

Profile:
Depth to duripan—20 to 40 inches

Ap horizon:
Value—5 or 6 dry, 4 or 5 moist

Wapshilla Series

Taxonomic class: Loamy-skeletal, mixed Mollic Cryoboralfs

Setting

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Landform: Mountains
Parent material: Kind—colluvium; source—basalt
Slope range: 30 to 60 percent
Elevation: 3,500 to 5,000 feet
Climatic data (average annual):
Precipitation—26 to 28 inches
Air temperature—42 to 44 degrees F
Frost-free period—60 to 80 days

Typical Pedon Description

Oi—1 inch to 0; undecomposed needles, leaves, cones, and twigs.

A—0 to 4 inches; dark brown (7.5YR 4/3) loam, dark brown (7.5YR 3/3) moist; moderate very fine and fine granular structure; slightly hard, very friable, slightly sticky and slightly plastic; many fine roots; many very fine irregular pores; slightly acid (pH 6.4); clear smooth boundary.

AB—4 to 10 inches; dark brown (7.5YR 4/4) loam, dark brown (7.5YR 3/4) moist; moderate very fine and fine granular structure; slightly hard, very friable, slightly sticky and slightly plastic; many fine roots; many very fine irregular pores; slightly acid (pH 6.4); clear smooth boundary.

Bt1—10 to 21 inches; brown (7.5YR 5/4) gravelly loam, dark brown (7.5YR 3/4) moist; moderate fine and medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common fine roots; common very fine tubular pores; 25 percent pebbles; few faint clay films on faces of peds; slightly acid (pH 6.2); gradual smooth boundary.

Bt2—21 to 25 inches; yellowish brown (10YR 5/4) very gravelly loam, dark yellowish brown (10YR

3/4) moist; moderate fine and medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few fine and coarse roots; common very fine tubular pores; 40 percent pebbles; common faint clay films on faces of peds and in pores; moderately acid (pH 6.0); gradual smooth boundary.

Bt3—25 to 45 inches; brown (7.5YR 5/4) very gravelly clay loam, dark brown (7.5YR 3/4) moist; moderate fine and medium subangular blocky structure; hard, firm, sticky and plastic; few fine roots; common very fine tubular pores; 60 percent pebbles; common faint clay films on faces of peds and in pores; moderately acid (pH 5.6); gradual smooth boundary.

BC—45 to 60 inches; brown (7.5YR 5/4) very gravelly clay loam, dark brown (7.5YR 3/4) moist; strong fine and medium subangular blocky structure; very hard, very firm, sticky and plastic; few medium roots; 60 percent pebbles; moderately acid (pH 5.6).

Typical Pedon Location

Map unit in which located: Wapshilla loam, 30 to 60 percent slopes

Location in survey area: About 9 miles north of New Meadows; 280 feet south and 1,200 feet west of the northeast corner of sec. 2, T. 20 N., R. 1 E.

Range in Characteristics

A horizon:
Value—4 or 5 dry, 2 or 3 moist
Chroma—2 to 4 dry or moist

Bt horizon:
Hue—7.5YR or 10YR
Value—5 or 6 dry, 3 or 4 moist
Chroma—3 to 6 dry or moist

Formation of the Soils

Soil is a natural body on the surface of the earth in which plants grow. It is a varied mixture of rocks and minerals, organic matter, water, and air. The rocks and minerals are fragmented and are in varying stages of weathering. Soils have more or less distinct layers, or horizons, that are the result of environmental forces acting on the material deposited or accumulated through geologic processes.

Factors of Soil Formation

The five soil-forming factors that determine the properties of the soils are (1) the climate under which the soil material has existed since accumulation, (2) the living organisms, (3) the topography, or relief, of the landscape, (4) the physical and mineral composition of the parent material, and (5) the length of time the forces of soil formation have acted on the parent material *(3)*. Soils differ according to the degree to which they were influenced by each of the soil-forming factors. In soil formation one factor can dominate and influence the properties of the soil more than the others; however, the interaction of all five factors generally determines the kind of soil that is formed.

Climate

Temperature and precipitation determine the rate of weathering of rock and the decomposition of minerals and organic matter. They also influence leaching, eluviation, and illuviation. The climate in Adams County generally is subhumid and is characterized by warm, dry summers and cold, wet winters with an abundance of snow. Mountainous areas have cooler summers and colder winters than do valley areas. Differences in the annual precipitation and temperature are associated with differences in elevation. The greatest amount of precipitation occurs in the mountains surrounding the valleys. The highest mountains have the coldest temperatures. The climate in Washington County is semiarid, and the variations are associated with differences in elevation. Summers are dry and warm, and winters are cold and moist. Precipitation is lowest in July, August, and September.

Climate affects the amount of vegetation produced on a soil. Areas that receive higher amounts of precipitation produce more abundant vegetation; thus, these areas have higher organic matter content and a thicker, darker colored surface layer. For example, the dark-colored Gross soils formed in areas that receive more moisture than areas of the light-colored Nyssaton soils.

Freezing and thawing help to breakdown rock to form parent material. These processes are active in breaking and cracking the underlying basalt in soils such as those of the Bakeoven, Reywat, and Gem series and the granite in soils such as those of the Bryan, Jughandle, Liggett, and Shellrock series.

Movement of water in the soil influences soil formation. Water moves soluble salts downward as it percolates through the soil, and it moves salts upward as it evaporates. Clay and carbonates are also moved downward by percolating water. The higher the precipitation, the deeper they are moved. Differences in the depth to lime and the amount of clay accumulation in the Gem and Purdam soils illustrate this movement. In the Gem soils, which receive 12 to 16 inches of precipitation, carbonates are at a depth of 20 to 30 inches or are only in the cracks of the bedrock in some areas. In the Purdam soils, which receive 10 to 12 inches of precipitation, carbonates are at a depth of 12 to 24 inches. In some areas that receive higher amounts of precipitation, carbonates are removed from the soil profile.

The high amount of moisture received in the northern part of the survey area results in abundant woodland vegetation. Many soils have an organic surface layer. Examples are the Bryan, Culdecole, Jughandle, Ligget, Naz, Nazaton, and Wapshilla soils. The decomposition of organic matter into humus results in soils that have a thick, dark-colored surface layer. Examples are the Bluebell, Gestrin, Gross, Naz, and Roseberry soils.

Because of the high amount of precipitation received in the northern part of the survey area, some of the soils in this part have been leached and have low base saturation. The Bryan, Donnel, Gestrin,

Jughandle, and Kangas soils have base saturation of less than 50 percent.

Changes in soil formation because of increased precipitation are illustrated by the soils that formed in basalt. The Bakeoven, Reywat, and Gem soils formed in the lowest precipitation zone. Farther north in a higher precipitation zone are the Riggins, Meland, and Jacknife soils. In the highest precipitation zone are the forested Ticanot, Bluebell, and Demast soils.

Living Organisms

Plant and animal life plays an important part in soil formation. The kind and amount of vegetation influence the amount of organic matter added to the soil. Before the survey area was settled, bunchgrasses were the dominant grasses in the area. Abundant decomposed fine grass roots resulted in a dark-colored surface layer and granular soil structure. In some areas of the Baldock soils, greasewood absorbed sodium from the lower horizons and it was returned to the surface when the sodium-filled leaves decayed. The taproots of alfalfa and other deep-rooted plants open channels in slowly permeable soils.

Overgrazing in some areas has destroyed the plant cover and resulted in erosion and loss of organic matter. Some areas of the Payette soils were overgrazed, and erosion reduced the organic matter content to levels below those considered typical for these soils. Farming can cause considerable changes in soils. Plowing mixes the upper layers, and ripping breaks up and mixes hardpans and tight subsoils. In preparing for irrigation, soil material commonly is moved from one place to another by land smoothing or land leveling operations.

Irrigation also changes soils by increasing the vegetation, which in turn increases the organic matter content. Water accumulation can make soils wet that otherwise are well drained. The management and cropping systems used affect whether the organic matter content of the soil stays the same, increases, or decreases over a long period.

Dense forest vegetation adds a large number of pine needles to the soil, producing a layer of duff. If trees are removed by fire or logging, the vegetation changes to brush, which has leaves that decompose faster than pine needles. If the layer of duff is removed, the surface layer can be lost through erosion.

In Adams County, large areas on the valley floors have been cleared and are used for farming. The introduction of grasses and the use of irrigation have changed the soils in these areas. The Donnel soils have the characteristics of a grassland soil, and the Gestrin and Roseberry soils are wet, partially because of irrigation.

Topography

Topography, or relief, of the landscape in the survey area influences soil formation through its effect on climate and erosion. The microclimate of areas that receive the same amount of precipitation can differ. Steep, north-facing slopes are cooler, and less water is lost through evaporation on these slopes than on nearby south-facing slopes.

Aspect also results in differences in soil depth and vegetation. For example, the deep Bryan soils on north-facing slopes have a dense canopy of Douglas fir and grand fir but the shallow Ticanot soils on south-facing slopes support only scattered stands of ponderosa pine. The dark-colored Van Dusen soils on steep, north-facing slopes have a higher content of organic matter than the light-colored Saralegui soils on south-facing slopes although both soils receive the same amount of precipitation.

Erosion is more severe on sloping soils than on nearly level soils. The rate of sheet erosion in some areas keeps pace with the rate of soil formation. For example, Lolalita soils are in areas where erosion maintains relatively young surfaces. Eroded material is transported to lower lying areas and forms colluvial and alluvial fans. A grading process leaves the larger, heavier soil particles on the upper slopes and carries the finer particles farther down the slope. The sandy Tindahay soils are near the upper part of alluvial fans, the coarse-loamy Cashmere soils are on the midslopes, and the fine-loamy Harpt soils are on the footslopes and toeslopes adjoining drainageways.

The mountainous areas are deeply dissected by drainageways, resulting in steep or very steep slopes. The soils on these slopes are well drained or somewhat excessively drained.

Erosion is accelerated following logging, fire, or other disturbance, resulting in many soils being only moderately deep. Examples of moderately deep, steep or very steep soils are those of the Bluebell, Brody, Jughandle, Gem, and Gross series.

Level to gently sloping soils that have been stable for a long time tend to develop distinct horizons. The Lankbush soils, for example, have a Bt horizon and prismatic or blocky structure. In addition to a Bt horizon, a hardpan has formed in the Chilcott and Purdam soils.

On some level or nearly level stream bottoms, enough water accumulates from stream flooding and irrigation to form a high water table. Removal of water

is difficult in the low lying areas. The soils in these areas have low levels of oxygen and are low in content of iron and manganese compounds; thus, they are mottled and gleyed. The Cabarton soils are mottled and gleyed because the water table remains near the surface for extended periods of time. The Blackwell, Melton, and Moulton soils formed in areas where the water table is high, but it fluctuates during the year. Because these soils have intermittent periods of poor soil aeration, they are mottled as a result of the reduction and oxidation of iron.

The soils on terraces above the flood plains generally are better drained, but even in these areas the topography affects soil drainage. The well drained Donnel soils are near the edge of the terraces, and the moderately well drained Gestrin soils are in slightly lower positions on the terraces.

A water table that is high enough to allow water to reach the surface by capillary action can result in saline and alkali conditions. Water moving upward through the soil carries dissolved salts that are left on the surface as the water evaporates. The salts accumulate in the soil if rainfall is insufficient to wash them out. In some areas salts move upward during the dry period in summer and downward during the moist period in winter. Accumulations of sodium and other salts result in alkali conditions. Alkali spots occur in some areas of the Baldock soils.

Parent Material

The parent material in which the soils in the survey area formed includes residual, alluvial, lacustrine, and glacial material. The largest single geologic unit in the area is the Columbia River Basalt, which occurs throughout the area. The soils in this unit formed in a thin mantle of loess over basalt residuum. The Gem soils are an example. These soils have a Bt horizon with an accumulation of clay that has moved down from the surface. An accumulation of clay is typical in most of the soils derived from basalt. The soils in areas of basalt are shallow to deep and range from very cobbly or stony to nearly free of cobbles or stones in the upper part. The Bluebell, Demast, Meland, Reywat, Rockly, and Ticanot soils are other examples of those that formed in basalt residuum.

In the northern part of Adams County is the Idaho Batholith, which consists of metamorphosed rock, including granite, gneiss, mica schist, and porphyritic biotite-granite. This rock is highly fractured and weathered, and the soils that developed in it have a high content of rock fragments. The Bryan, Jughandle, Liggett, Naz, Nazaton, and Shellrock soils are examples.

Soils that formed in the Idaho Formation and related formations are in the southern part of Washington County. The material in these formations contains granitic sand and layers of tuffaceous material. Most of the soils are also covered with a thin layer of loess. The Lolalita, Payette, and Saralegui soils formed in the sand, and the Ager, Deshler, Deterson, and Glasgow soils formed in the tuffaceous material. The Oldsferry soils along the Snake River formed in shale residuum.

Alluvial soils of the stream bottoms exhibit little profile development. Most of the alluvium is derived from mixed basaltic and granitic sources. In areas close to either basalt or granite, the alluvium is derived mainly from the dominant rock in the area. The Baldock, Blackwell, Kangas, Langrell, Melton, Moulton, Newell, Roseberry, and Shoepeg soils are examples of alluvial soils.

Soils that formed in calcareous lacustrine material are mainly on terraces and uplands along the Weiser River. In steep disturbed areas, that rate of erosion has kept pace with the rate of soil formation. The Nyssaton soils are much like the original lacustrine sediment, and the Owyhee soils have only had the calcium carbonate leached out of the surface layer. In the more stable areas, the Greenleaf soils, which formed in similar lacustrine material, have developed a Bt horizon.

There is some evidence of glacial action in Adams County. Till plains of glacial outwash material are on the valley floor in New Meadows. The Donnel, Gestrin, and Kangas soils formed in this material.

Time

The length of time required for the formation of a soil depends largely on the other factors of soil formation. Soluble material can be moved from the surface in a short time in areas that receive large amounts of water, but it takes a longer period of time in areas that receive smaller amounts of water. The content of organic matter depends on the amount of vegetation produced and the rate of decomposition.

The length of time that parent material remains in place is reflected in soil formation. Older soils have well-defined horizons, and younger soils have less distinct horizons. Soils on smooth ridgetops and high-lying, older terraces have well-defined horizons. Sloping soils that are subject to erosion and soils on flood plains that receive new deposits do not have distinct horizons because they have been in place for a relatively short period of time.

The Greenleaf, Owyhee, and Nyssaton soils formed in lacustrine sediment. The Greenleaf soils are in the oldest, most stable areas, and the Nyssaton soils are

in the youngest areas. The Greenleaf soils have distinct horizons. Water has removed the carbonates from the A and Bt horizons and moved clay from the A horizon into the Bt horizon. In the Owyhee soils, water has moved the carbonates from the A and Bw horizons into the Bk horizon. In the Nyssaton soil, the parent material has been changed very little. The content of organic matter in the surface layer parallels the age of the soils. The Greenleaf soils have the highest content of organic matter, the Owyhee soils have a moderate amount, and the Nyssaton soils have the lowest amount.

The length of time that parent material remains in place is reflected in the formation of soils. The Sudpeak and Swede soils formed in parent material that has remained in place for a long time. Because of the older age, these soils have developed a subsoil of clay loam and silty clay loam.

Soils that formed on steep slopes have little profile development. The rate of erosion has kept pace with the rate of soil formation, resulting in soils that are relatively young. The Liggett and Shellrock soils are examples.

In general, the soils that formed in recent alluvium on flood plains and low terraces are young. In soils such as those of the Donnel, Kangas, and Roseberry series, a dark-colored surface layer has formed and some of the bases have been leached out. Horizon development in these soils has started, but more time is required for further development *(9, 10)*.

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Glossary

ABC soil. A soil having an A, a B, and a C horizon.

AC soil. A soil having only an A and a C horizon. Commonly, such soil formed in recent alluvium or on steep, rocky slopes.

Aeration, soil. The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alkali (sodic) soil. A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

Alluvial fan. The fanlike deposit of a stream where it issues from a gorge upon a plain or of a tributary stream near or at its junction with its main stream.

Alluvium. Material, such as sand, silt, or clay, deposited on land by streams.

Animal unit month (AUM). The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

Aquic conditions. Current soil wetness characterized by saturation, reduction, and redoximorphic features.

Area reclaim (in tables). An area difficult to reclaim after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

Argillic horizon. A subsoil horizon characterized by an accumulation of illuvial clay.

Aspect. The direction in which a slope faces.

Association, soil. A group of soils or miscellaneous areas geographically associated in a characteristic repeating pattern and defined and delineated as a single map unit.

Available water capacity (available moisture capacity). The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as:

Very low	0 to 3
Low	3 to 6
Moderate	6 to 9
High	9 to 12
Very high	more than 12

Back slope. The geomorphic component that forms the steepest inclined surface and principal element of many hillsides. Back slopes in profile are commonly steep, are linear, and may or may not include cliff segments.

Basal area. The area of a cross section of a tree, generally referring to the section at breast height and measured outside the bark. It is a measure of stand density, commonly expressed in square feet.

Base saturation. The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.

Bedrock. The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

Bedrock-controlled topography. A landscape where the configuration and relief of the landforms are determined or strongly influenced by the underlying bedrock.

Bench terrace. A raised, level or nearly level strip of earth constructed on or nearly on a contour, supported by a barrier of rocks or similar material, and designed to make the soil suitable for tillage and to prevent accelerated erosion.

Bisequum. Two sequences of soil horizons, each of which consists of an illuvial horizon and the overlying eluvial horizons.

Blowout. A shallow depression from which all or most of the soil material has been removed by the wind. A blowout has a flat or irregular floor formed by a resistant layer or by an accumulation of pebbles or

cobbles. In some blowouts the water table is exposed.

Bottom land. The normal flood plain of a stream, subject to flooding.

Boulders. Rock fragments larger than 2 feet (60 centimeters) in diameter.

Breaks. The steep and very steep broken land at the border of an upland summit that is dissected by ravines.

Breast height. An average height of 4.5 feet above the ground surface; the point on a tree where diameter measurements are ordinarily taken.

Brush management. Use of mechanical, chemical, or biological methods to make conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.

Butte. An isolated small mountain or hill with steep or precipitous sides and a top variously flat, rounded, or pointed that may be a residual mass isolated by erosion or an exposed volcanic neck.

Cable yarding. A method of moving felled trees to a nearby central area for transport to a processing facility. Most cable yarding systems involve use of a drum, a pole, and wire cables in an arrangement similar to that of a rod and reel used for fishing. To reduce friction and soil disturbance, felled trees generally are reeled in while one end is lifted or the entire log is suspended.

Calcareous soil. A soil containing enough calcium carbonate (commonly combined with magnesium carbonate) to effervesce visibly when treated with cold, dilute hydrochloric acid.

Canopy. The leafy crown of trees or shrubs. (See Crown.)

Canyon. A long, deep, narrow, very steep sided valley with high, precipitous walls in an area of high local relief.

Capillary water. Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.

Catena. A sequence, or "chain," of soils on a landscape that formed in similar kinds of parent material but have different characteristics as a result of differences in relief and drainage.

Cation. An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.

Cation-exchange capacity. The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.

Chemical treatment. Control of unwanted vegetation through the use of chemicals.

Chiseling. Tillage with an implement having one or more soil-penetrating points that shatter or loosen hard, compacted layers to a depth below normal plow depth.

Clay. As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

Clay depletions. Low-chroma zones having a low content of iron, manganese, and clay because of the chemical reduction of iron and manganese and the removal of iron, manganese, and clay. A type of redoximorphic depletion.

Clay film. A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.

Claypan. A slowly permeable soil horizon that contains much more clay than the horizons above it. A claypan is commonly hard when dry and plastic or stiff when wet.

Coarse textured soil. Sand or loamy sand.

Cobble (or cobblestone). A rounded or partly rounded fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.

Cobbly soil material. Material that is 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material has 35 to 60 percent of these rock fragments, and extremely cobbly soil material has more than 60 percent.

Colluvium. Soil material or rock fragments, or both, moved by creep, slide, or local wash and deposited at the base of steep slopes.

Complex slope. Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.

Complex, soil. A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or

miscellaneous areas are somewhat similar in all areas.

Compressible (in tables). Excessive decrease in volume of soft soil under load.

Concretions. Cemented bodies with crude internal symmetry organized around a point, a line, or a plane. They typically take the form of concentric layers visible to the naked eye. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up concretions. If formed in place, concretions of iron oxide or manganese oxide are generally considered a type of redoximorphic concentration.

Conglomerate. A coarse grained, clastic rock composed of rounded or subangular rock fragments more than 2 millimeters in diameter. It commonly has a matrix of sand and finer textured material. Conglomerate is the consolidated equivalent of gravel.

Conservation cropping system. Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the effects of the soil-depleting crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.

Conservation tillage. A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.

Consistence, soil. Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the "Soil Survey Manual."

Contour stripcropping. Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

Control section. The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.

Corrosion. Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.

Cover crop. A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

Cropping system. Growing crops according to a planned system of rotation and management practices.

Crop residue management. Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.

Cross-slope farming. Deliberately conducting farming operations on sloping farmland in such a way that tillage is across the general slope.

Crown. The upper part of a tree or shrub, including the living branches and their foliage.

Cuesta. A hill or ridge that has a gentle slope on one side and a steep slope on the other; specifically, an asymmetric, homoclinal ridge capped by resistant rock layers of slight or moderate dip.

Cutbanks cave (in tables). The walls of excavations tend to cave in or slough.

Decreasers. The most heavily grazed climax range plants. Because they are the most palatable, they are the first to be destroyed by overgrazing.

Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.

Dense layer (in tables). A very firm, massive layer that has a bulk density of more than 1.8 grams per cubic centimeter. Such a layer affects the ease of digging and can affect filling and compacting.

Depth, soil. Generally, the thickness of the soil over bedrock or another restrictive layer. Very deep soils are more than 60 inches deep over a restrictive layer; deep soils, 40 to 60 inches; moderately deep, 20 to 40 inches; shallow, 10 to 20 inches; and very shallow, less than 10 inches.

Depth to rock (in tables). Bedrock is too near the surface for the specified use.

Diversion (or diversion terrace). A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.

Drainage class (natural). Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a

consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—*excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained,* and *very poorly drained.* These classes are defined in the "Soil Survey Manual."

Drainage, surface. Runoff, or surface flow of water, from an area.

Duff. A generally firm organic layer on the surface of mineral soils. It consists of fallen plant material that is in the process of decomposition and includes everything from the litter on the surface to underlying pure humus.

Duripan. A subsurface horizon cemented with silica to the degree that fragments do not slake during prolonged soaking in water or hydrochloric acid.

Eluviation. The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

Eolian soil material. Earthy parent material accumulated through wind action; commonly refers to sandy material in dunes or to loess in blankets on the surface.

Ephemeral stream. A stream, or reach of a stream, that flows only in direct response to precipitation. It receives no long-continued supply from melting snow or other source, and its channel is above the water table at all times.

Erosion. The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.

Erosion (geologic). Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.

Erosion (accelerated). Erosion much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

Escarpment. A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. Synonym: scarp.

Excess fines (in tables). Excess silt and clay in the soil. The soil does not provide a source of gravel or sand for construction purposes.

Excess lime (in tables). Excess carbonates in the soil that restrict the growth of some plants.

Excess salts (in tables). Excess water-soluble salts in the soil that restrict the growth of most plants.

Excess sodium (in tables). Excess exchangeable sodium in the soil. The resulting poor physical properties restrict the growth of plants.

Excess sulfur (in tables). Excessive amount of sulfur in the soil. The sulfur causes extreme acidity if the soil is drained, and the growth of most plants is restricted.

Extrusive rock. Igneous rock derived from deep-seated molten matter (magma) emplaced on the earth's surface.

Fallow. Cropland left idle in order to restore productivity through accumulation of moisture. Summer fallow is common in regions of limited rainfall where cereal grain is grown. The soil is tilled for at least one growing season for weed control and decomposition of plant residue.

Fan terrace. A relict alluvial fan, no longer a site of active deposition, incised by younger and lower alluvial surfaces.

Fast intake (in tables). The rapid movement of water into the soil.

Fertility, soil. The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.

Fibric soil material (peat). The least decomposed of all organic soil material. Peat contains a large amount of well preserved fiber that is readily identifiable according to botanical origin. Peat has the lowest bulk density and the highest water content at saturation of all organic soil material.

Field moisture capacity. The moisture content of a soil, expressed as a percentage of the ovendry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called *normal field capacity, normal moisture capacity,* or *capillary capacity.*

Fine textured soil. Sandy clay, silty clay, or clay.

Firebreak. Area cleared of flammable material to stop or help control creeping or running fires. It also serves as a line from which to work and to facilitate the movement of firefighters and equipment. Designated roads also serve as firebreaks.

First bottom. The normal flood plain of a stream, subject to frequent or occasional flooding.

Flood plain. A nearly level alluvial plain that borders a stream and is subject to flooding unless protected artificially.

Foothill. A steeply sloping upland that has relief of as much as 1,000 feet (300 meters) and fringes a mountain range or high-plateau escarpment.

Foot slope. The inclined surface at the base of a hill.

Forb. Any herbaceous plant not a grass or a sedge.

Forest cover. All trees and other woody plants (underbrush) covering the ground in a forest.

Forest type. A stand of trees similar in composition and development because of given physical and biological factors by which it may be differentiated from other stands.

Fragile (in tables). A soil that is easily damaged by use or disturbance.

Frost action (in tables). Freezing and thawing of soil moisture. Frost action can damage roads, buildings and other structures, and plant roots.

Genesis, soil. The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

Gilgai. Commonly, a succession of microbasins and microknolls in nearly level areas or of microvalleys and microridges parallel with the slope. Typically, the microrelief of clayey soils that shrink and swell considerably with changes in moisture content.

Gleyed soil. Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

Grassed waterway. A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.

Gravel. Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

Gravelly soil material. Material that is 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

Green manure crop (agronomy). A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.

Ground water. Water filling all the unblocked pores of the material below the water table.

Gully. A miniature valley with steep sides cut by running water and through which water ordinarily runs only after rainfall. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage; a rill is of lesser depth and can be smoothed over by ordinary tillage.

Hard bedrock. Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.

Hardpan. A hardened or cemented soil horizon, or layer. The soil material is sandy, loamy, or clayey and is cemented by iron oxide, silica, calcium carbonate, or other substance.

High-residue crops. Such crops as small grain and corn used for grain. If properly managed, residue from these crops can be used to control erosion until the next crop in the rotation is established. These crops return large amounts of organic matter to the soil.

Hill. A natural elevation of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a well defined outline; hillsides generally have slopes of more than 15 percent. The distinction between a hill and a mountain is arbitrary and is dependent on local usage.

Horizon, soil. A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the "Soil Survey Manual." The major horizons of mineral soil are as follows:

O horizon.—An organic layer of fresh and decaying plant residue.

A horizon.—The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

E horizon.—The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

B horizon.—The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or

browner colors than those in the A horizon; or (4) a combination of these.

C horizon.—The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

Cr horizon.—Soft, consolidated bedrock beneath the soil.

R layer.—Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.

Humus. The well decomposed, more or less stable part of the organic matter in mineral soils.

Hydrologic soil groups. Refers to soils grouped according to their runoff potential. The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties are depth to a seasonal high water table, the infiltration rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

Igneous rock. Rock formed by solidification from a molten or partially molten state. Major varieties include plutonic and volcanic rock. Examples are andesite, basalt, and granite.

Illuviation. The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

Impervious soil. A soil through which water, air, or roots penetrate slowly or not at all. No soil is absolutely impervious to air and water all the time.

Increasers. Species in the climax vegetation that increase in amount as the more desirable plants are reduced by close grazing. Increasers commonly are the shorter plants and the less palatable to livestock.

Infiltration. The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

Infiltration capacity. The maximum rate at which water can infiltrate into a soil under a given set of conditions.

Infiltration rate. The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

Intake rate. The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake rate for design purposes is not a constant but is a variable depending on the net irrigation application. The rate of water intake, in inches per hour, is expressed as follows:

Less than 0.2	very low
0.2 to 0.4	low
0.4 to 0.75	moderately low
0.75 to 1.25	moderate
1.25 to 1.75	moderately high
1.75 to 2.5	high
More than 2.5	very high

Intermittent stream. A stream, or reach of a stream, that flows for prolonged periods only when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Invaders. On range, plants that encroach into an area and grow after the climax vegetation has been reduced by grazing. Generally, plants invade following disturbance of the surface.

Iron depletions. Low-chroma zones having a low content of iron and manganese oxide because of chemical reduction and removal, but having a clay content similar to that of the adjacent matrix. A type of redoximorphic depletion.

Irrigation. Application of water to soils to assist in production of crops. Methods of irrigation are:

Border.—Water is applied at the upper end of a strip in which the lateral flow of water is controlled by small earth ridges called border dikes, or borders.

Controlled flooding.—Water is released at intervals from closely spaced field ditches and distributed uniformly over the field.

Corrugation.—Water is applied to small, closely spaced furrows or ditches in fields of close-growing crops or in orchards so that it flows in only one direction.

Drip (or trickle).—Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.

Furrow.—Water is applied in small ditches made by

cultivation implements. Furrows are used for tree and row crops.

Sprinkler.—Water is sprayed over the soil surface through pipes or nozzles from a pressure system.

Wild flooding.—Water, released at high points, is allowed to flow onto an area without controlled distribution.

Knoll. A small, low, rounded hill rising above adjacent landforms.

Lacustrine deposit. Material deposited in lake water and exposed when the water level is lowered or the elevation of the land is raised.

Landslide. The rapid downhill movement of a mass of soil and loose rock, generally when wet or saturated. The speed and distance of movement, as well as the amount of soil and rock material, vary greatly.

Large stones (in tables). Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.

Leaching. The removal of soluble material from soil or other material by percolating water.

Liquid limit. The moisture content at which the soil passes from a plastic to a liquid state.

Loam. Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

Loess. Fine grained material, dominantly of silt-sized particles, deposited by wind.

Low-residue crops. Such crops as corn used for silage, peas, beans, and potatoes. Residue from these crops is not adequate to control erosion until the next crop in the rotation is established. These crops return little organic matter to the soil.

Low strength. The soil is not strong enough to support loads.

Masses. Concentrations of substances in the soil matrix that do not have a clearly defined boundary with the surrounding soil material and cannot be removed as a discrete unit. Common compounds making up masses are calcium carbonate, gypsum or other soluble salts, iron oxide, and manganese oxide. Masses consisting of iron oxide or manganese oxide generally are considered a type of redoximorphic concentration.

Mechanical treatment. Use of mechanical equipment for seeding, brush management, and other management practices.

Medium textured soil. Very fine sandy loam, loam, silt loam, or silt.

Mesa. A broad, nearly flat topped and commonly isolated upland mass characterized by summit widths that are more than the heights of bounding erosional scarps.

Metamorphic rock. Rock of any origin altered in mineralogical composition, chemical composition, or structure by heat, pressure, and movement. Nearly all such rocks are crystalline.

Mineral soil. Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.

Minimum tillage. Only the tillage essential to crop production and prevention of soil damage.

Miscellaneous area. An area that has little or no natural soil and supports little or no vegetation.

Moderately coarse textured soil. Coarse sandy loam, sandy loam, or fine sandy loam.

Moderately fine textured soil. Clay loam, sandy clay loam, or silty clay loam.

Mollic epipedon. A thick, dark, humus-rich surface horizon (or horizons) that has high base saturation and pedogenic soil structure. It may include the upper part of the subsoil.

Morphology, soil. The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.

Mottling, soil. Irregular spots of different colors that vary in number and size. Descriptive terms are as follows: abundance—*few, common,* and *many;* size—*fine, medium,* and *coarse;* and contrast—*faint, distinct,* and *prominent.* The size measurements are of the diameter along the greatest dimension. *Fine* indicates less than 5 millimeters (about 0.2 inch); *medium,* from 5 to 15 millimeters (about 0.2 to 0.6 inch); and *coarse,* more than 15 millimeters (about 0.6 inch).

Mountain. A natural elevation of the land surface, rising more than 1,000 feet above surrounding lowlands, commonly of restricted summit area (relative to a plateau) and generally having steep sides. A mountain can occur as a single, isolated mass or in a group forming a chain or range.

Muck. Dark, finely divided, well decomposed organic soil material.

Mudstone. Sedimentary rock formed by induration of silt and clay in approximately equal amounts.

Munsell notation. A designation of color by degrees of three simple variables—hue, value, and chroma.

For example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.

Natric horizon. A special kind of argillic horizon that contains enough exchangeable sodium to have an adverse effect on the physical condition of the subsoil.

Neutral soil. A soil having a pH value of 6.6 to 7.3. (See Reaction, soil.)

Nodules. Cemented bodies lacking visible internal structure. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up nodules. If formed in place, nodules of iron oxide or manganese oxide are considered types of redoximorphic concentrations.

Nonrippable. Refers to a hardpan that cannot be penetrated and broken by normal agricultural tillage equipment.

Nutrient, plant. Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

Organic matter. Plant and animal residue in the soil in various stages of decomposition. The content of organic matter in the surface layer is described as follows:

Very low	less than 0.5 percent
Low	0.5 to 1.0 percent
Moderately low	1.0 to 2.0 percent
Moderate	2.0 to 4.0 percent
High	4.0 to 8.0 percent
Very high	more than 8.0 percent

Pan. A compact, dense layer in a soil that impedes the movement of water and the growth of roots. For example, *hardpan, fragipan, claypan, plowpan,* and *traffic pan.*

Parent material. The unconsolidated organic and mineral material in which soil forms.

Ped. An individual natural soil aggregate, such as a granule, a prism, or a block.

Pedon. The smallest volume that can be called "a soil." A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

Percolation. The downward movement of water through the soil.

Percs slowly (in tables). The slow movement of water through the soil adversely affects the specified use.

Permafrost. Layers of soil, or even bedrock, occurring in arctic or subarctic regions, in which a temperature below freezing has existed continuously for a long time.

Permeability. The quality of the soil that enables water or air to move downward through the profile. The rate at which a saturated soil transmits water is accepted as a measure of this quality. In soil physics, the rate is referred to as "saturated hydraulic conductivity," which is defined in the "Soil Survey Manual." In line with conventional usage in the engineering profession and with traditional usage in published soil surveys, this rate of flow continues to be expressed as "permeability." Terms describing permeability, measured in inches per hour, are as follows:

Extremely slow	0.0 to 0.01 inch
Very slow	0.01 to 0.06 inch
Slow	0.06 to 0.2 inch
Moderately slow	0.2 to 0.6 inch
Moderate	0.6 inch to 2.0 inches
Moderately rapid	2.0 to 6.0 inches
Rapid	6.0 to 20 inches
Very rapid	more than 20 inches

Phase, soil. A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

pH value. A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

Piping (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

Pitting (in tables). Pits caused by melting around ice. They form on the soil after plant cover is removed.

Plasticity index. The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

Plastic limit. The moisture content at which a soil changes from semisolid to plastic.

Plowpan. A compacted layer formed in the soil directly below the plowed layer.

Ponding. Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

Poor filter (in tables). Because of rapid or very rapid

permeability, the soil may not adequately filter effluent from a waste disposal system.

Poorly graded. Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

Poor outlets (in tables). Refers to areas where surface or subsurface drainage outlets are difficult or expensive to install.

Potential plant community. The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.

Potential rooting depth (effective rooting depth). Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

Prescribed burning. Deliberately burning an area for specific management purposes, under the appropriate conditions of weather and soil moisture and at the proper time of day.

Productivity, soil. The capability of a soil for producing a specified plant or sequence of plants under specific management.

Profile, soil. A vertical section of the soil extending through all its horizons and into the parent material.

Proper grazing use. Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and promotes the accumulation of litter and mulch necessary to conserve soil and water.

Range condition. The present composition of the plant community on a range site in relation to the potential plant community for that site. Range condition is expressed as excellent, good, fair, or poor on the basis of how much the present plant community has departed from the potential.

Rangeland. Land on which the potential natural vegetation is predominantly grasses, grasslike plants, forbs, or shrubs suitable for grazing or browsing. It includes natural grasslands, savannas, many wetlands, some deserts, tundras, and areas that support certain forb and shrub communities.

Range site. An area of rangeland where climate, soil, and relief are sufficiently uniform to produce a distinct natural plant community. A range site is the product of all the environmental factors responsible for its development. It is typified by an association of species that differ from those on other range sites in kind or proportion of species or total production.

Reaction, soil. A measure of acidity or alkalinity of a soil, expressed in pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Ultra acid	less than 3.5
Extremely acid	3.5 to 4.4
Very strongly acid	4.5 to 5.0
Strongly acid	5.1 to 5.5
Moderately acid	5.6 to 6.0
Slightly acid	6.1 to 6.5
Neutral	6.6 to 7.3
Mildly alkaline	7.4 to 7.8
Moderately alkaline	7.9 to 8.4
Strongly alkaline	8.5 to 9.0
Very strongly alkaline	9.1 and higher

Redoximorphic concentrations. Nodules, concretions, soft masses, pore linings, and other features resulting from the accumulation of iron or manganese oxide. An indication of chemical reduction and oxidation resulting from saturation.

Redoximorphic depletions. Low-chroma zones from which iron and manganese oxide or a combination of iron and manganese oxide and clay has been removed. These zones are indications of the chemical reduction of iron resulting from saturation.

Redoximorphic features. Redoximorphic concentrations, redoximorphic depletions, reduced matrices, a positive reaction to alpha,alpha-dipyridyl, and other features indicating the chemical reduction and oxidation of iron and manganese compounds resulting from saturation.

Reduced matrix. A soil matrix that has low chroma in situ because of chemically reduced iron (Fe II). The chemical reduction results from nearly continuous wetness. The matrix undergoes a change in hue or chroma within 30 minutes after exposure to air as the iron is oxidized (Fe III). A type of redoximorphic feature.

Relief. The elevations or inequalities of a land surface, considered collectively.

Residuum (residual soil material). Unconsolidated, weathered or partly weathered mineral material that

accumulated as consolidated rock disintegrated in place.

Rill. A steep-sided channel resulting from accelerated erosion. A rill generally is a few inches deep and not wide enough to be an obstacle to farm machinery.

Rippable. Refers to a hardpan that can be penetrated and broken by normal agricultural tillage equipment.

Road cut. A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.

Rock fragments. Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

Rooting depth (in tables). Shallow root zone. The soil is shallow over a layer that greatly restricts roots.

Root zone. The part of the soil that can be penetrated by plant roots.

Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

Saline soil. A soil containing soluble salts in an amount that impairs growth of plants. A saline soil does not contain excess exchangeable sodium.

Salty water (in tables). Water that is too salty for consumption by livestock.

Sand. As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

Sandstone. Sedimentary rock containing dominantly sand-sized particles.

Saturation. Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.

Sedimentary rock. Rock made up of particles deposited from suspension in water. The chief kinds of sedimentary rock are conglomerate, formed from gravel; sandstone, formed from sand; shale, formed from clay; and limestone, formed from soft masses of calcium carbonate. There are many intermediate types. Some wind-deposited sand is consolidated into sandstone.

Seepage (in tables). The movement of water through the soil. Seepage adversely affects the specified use.

Series, soil. A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.

Shale. Sedimentary rock formed by the hardening of a clay deposit.

Sheet erosion. The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.

Shrink-swell (in tables). The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

Silica. A combination of silicon and oxygen. The mineral form is called quartz.

Silica-sesquioxide ratio. The ratio of the number of molecules of silica to the number of molecules of alumina and iron oxide. The more highly weathered soils or their clay fractions in warm-temperate, humid regions, and especially those in the tropics, generally have a low ratio.

Silt. As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.

Siltstone. Sedimentary rock made up of dominantly silt-sized particles.

Similar soils. Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.

Sinkhole. A depression in the landscape where limestone has been dissolved.

Site index. A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75.

Slickensides. Polished and grooved surfaces produced by one mass sliding past another. In soils, slickensides may occur at the bases of slip surfaces on the steeper slopes; on faces of blocks, prisms, and columns; and in swelling clayey soils, where there is marked change in moisture content.

Slick spot. A small area of soil having a puddled,

crusted, or smooth surface and an excess of exchangeable sodium. The soil generally is silty or clayey, is slippery when wet, and is low in productivity.

Slippage (in tables). Soil mass susceptible to movement downslope when loaded, excavated, or wet.

Slope. The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance. In this survey, classes for slope are as follows:

Nearly level	0 to 2 percent
Very gently sloping	2 to 4 percent
Gently sloping	4 to 8 percent
Moderately sloping	8 to 12 percent
Strongly sloping	12 to 20 percent
Moderately steep	20 to 30 percent
Steep	30 to 60 percent
Very steep	60 percent and higher

Slope (in tables). Slope is great enough that special practices are required to ensure satisfactory performance of the soil for a specific use.

Slow intake (in tables). The slow movement of water into the soil.

Slow refill (in tables). The slow filling of ponds, resulting from restricted permeability in the soil.

Small stones (in tables). Rock fragments less than 3 inches (7.6 centimeters) in diameter. Small stones adversely affect the specified use of the soil.

Sodic (alkali) soil. A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

Sodicity. The degree to which a soil is affected by exchangeable sodium. Sodicity is expressed as a sodium adsorption ratio (SAR) of a saturation extract, or the ratio of Na^{+} to $Ca^{++} + Mg^{++}$. The degrees of sodicity and their respective ratios are:

Slight	less than 13:1
Moderate	13-30:1
Strong	more than 30:1

Soft bedrock. Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

Soil. A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief over periods of time.

Soil separates. Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand	2.0 to 1.0
Coarse sand	1.0 to 0.5
Medium sand	0.5 to 0.25
Fine sand	0.25 to 0.10
Very fine sand	0.10 to 0.05
Silt	0.05 to 0.002
Clay	less than 0.002

Solum. The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

Stone line. A concentration of coarse fragments in a soil. Generally, it is indicative of an old weathered surface. In a cross section, the line may be one fragment or more thick. It generally overlies material that weathered in place and is overlain by recent sediment of variable thickness.

Stones. Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.

Stony. Refers to a soil containing stones in numbers that interfere with or prevent tillage.

Stripcropping. Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to wind erosion and water erosion.

Structure, soil. The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular. Structureless* soils are either *single grained* (each grain by itself, as in dune sand) or *massive* (the particles adhering without any regular cleavage, as in many hardpans).

Stubble mulch. Stubble or other crop residue left on the soil or partly worked into the soil. It protects

the soil from wind erosion and water erosion after harvest, during preparation of a seedbed for the next crop, and during the early growing period of the new crop.

Subsoil. Technically, the B horizon; roughly, the part of the solum below plow depth.

Subsoiling. Tilling a soil below normal plow depth, ordinarily to shatter a hardpan or claypan.

Substratum. The part of the soil below the solum.

Subsurface layer. Technically, the E horizon. Generally refers to a leached horizon lighter in color and lower in content of organic matter than the overlying surface layer.

Summer fallow. The tillage of uncropped land during the summer to control weeds and allow storage of moisture in the soil for the growth of a later crop. A practice common in semiarid regions, where annual precipitation is not enough to produce a crop every year. Summer fallow is frequently practiced before planting winter grain.

Surface layer. The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the "plow layer," or the "Ap horizon."

Surface soil. The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.

Talus. Fragments of rock and other soil material accumulated by gravity at the foot of cliffs or steep slopes.

Taxadjuncts. Soils that cannot be classified in a series recognized in the classification system. Such soils are named for a series they strongly resemble and are designated as taxadjuncts to that series because they differ in ways too small to be of consequence in interpreting their use and behavior. Soils are recognized as taxadjuncts only when one or more of their characteristics are slightly outside the range defined for the family of the series for which the soils are named.

Terrace. An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.

Terrace (geologic). An old alluvial plain, ordinarily flat or undulating, bordering a river, a lake, or the sea.

Texture, soil. The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay,* and *clay.* The sand, loamy sand, and sandy loam classes may be further divided by specifying "coarse," "fine," or "very fine."

Thin layer (in tables). Otherwise suitable soil material that is too thin for the specified use.

Tilth, soil. The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

Toe slope. The outermost inclined surface at the base of a hill; part of a foot slope.

Too arid (in tables). The soil is dry most of the time, and vegetation is difficult to establish.

Topsoil. The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.

Toxicity (in tables). Excessive amount of toxic substances, such as sodium or sulfur, that severely hinder establishment of vegetation or severely restrict plant growth.

Trace elements. Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.

Tuff. A compacted deposit that is 50 percent or more volcanic ash and dust.

Unstable fill (in tables). Risk of caving or sloughing on banks of fill material.

Upland. Land at a higher elevation, in general, than the alluvial plain or stream terrace; land above the lowlands along streams.

Valley fill. In glaciated regions, material deposited in stream valleys by glacial meltwater. In nonglaciated regions, alluvium deposited by heavily loaded streams.

Variegation. Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.

Water bars. Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.

Weathering. All physical and chemical changes produced in rocks or other deposits at or near the earth's surface by atmospheric agents. These changes result in disintegration and decomposition of the material.

Well graded. Refers to soil material consisting of coarse grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.

Wilting point (or permanent wilting point). The moisture content of soil, on an ovendry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.

Windthrow. The uprooting and tipping over of trees by the wind.

Tables

Table 1.--Temperature and Precipitation

(Recorded in the period 1931-90 at Cambridge, New Meadows, and Weiser, Idaho)

Month	Temperature						Precipitation			
				2 years in 10 will have--				2 years in 10 will have--		
	Average daily maximum	Average daily minimum	Average daily	Maximum temperature higher than--	Minimum temperature lower than--	Average number of growing degree days*	Average	Less than--	More than--	Average number of days with 0.10 inch or more
	°F	°F	°F	°F	°F	Units	In	In	In	
Cambridge										
January	31.3	12.4	21.9	48	-22	1	2.94	1.50	4.20	7
February	38.4	17.5	28.0	56	-14	5	2.44	1.25	3.48	6
March	50.0	26.5	38.3	70	5	64	2.06	1.05	2.93	5
April	63.0	33.9	48.4	84	19	256	1.30	0.55	1.95	3
May	73.0	40.4	56.7	93	25	518	1.28	0.47	1.96	3
June	81.1	47.3	64.2	100	32	725	1.29	0.40	2.02	3
July	92.5	53.5	73.0	107	37	1,031	0.29	0.10	0.57	0
August	90.7	50.2	70.4	105	35	943	0.39	0.08	0.79	1
September	80.1	40.5	60.3	99	24	616	0.78	0.20	1.37	2
October	66.4	32.0	49.2	86	16	289	1.36	0.39	2.26	3
November	47.2	25.0	36.1	66	2	38	2.64	0.97	4.11	6
December	35.6	17.6	26.6	54	-13	4	3.04	1.34	4.49	7
Yearly:										
Average	62.4	33.1	47.8	---	---	---	---	---	---	---
Extreme	107	-34	---	108	-24	---	---	---	---	---
Total	---	---	---	---	---	4,490	19.81	14.02	24.32	46
New Meadows										
January	29.9	7.1	18.5	45	-30	0	3.53	1.74	5.08	9
February	37.0	10.9	23.9	51	-25	0	2.48	1.39	3.44	8
March	44.1	17.5	30.8	62	-11	8	2.32	1.38	3.17	7
April	55.0	26.2	40.6	77	11	90	1.86	0.90	2.68	5
May	64.9	32.8	48.9	---	18	275	1.87	1.01	2.63	5
June	73.9	39.3	56.6	93	24	476	1.89	0.84	2.79	5
July	84.2	41.9	63.0	98	29	695	0.62	0.15	1.00	1
August	82.8	39.9	61.4	---	28	635	0.82	0.21	1.38	2
September	72.8	32.3	52.5	92	17	355	1.39	0.47	2.34	3
October	60.0	24.8	42.4	82	10	115	1.84	0.63	3.00	4
November	43.2	19.8	31.5	64	-6	11	2.86	1.37	4.16	8
December	31.9	10.7	21.3	48	-26	0	3.37	1.47	4.99	9
Yearly:										
Average	56.6	25.3	41.0	---	---	---	---	---	---	---
Extreme	104	-45	---	99	-34	---	---	---	---	---
Total	---	---	---	---	---	2,660	24.85	17.7	27.81	66

See footnote at end of table.

Table 1.--Temperature and Precipitation--Continued

Month	Temperature						Precipitation			
				2 years in 10 will have--				2 years in 10 will have--		
	Average daily maximum	Average daily minimum	Average daily	Maximum temperature higher than--	Minimum temperature lower than--	Average number of growing degree days*	Average	Less than--	More than--	Average number of days with 0.10 inch or more
	°F	°F	°F	°F	°F	Units	In	In	In	
Weiser										
January-----	34.8	17.4	26.1	54	-13	6	1.62	0.77	2.44	4
February----	43.7	23.3	33.5	61	-5	22	1.13	0.42	1.80	4
March-------	55.1	29.6	42.3	73	13	121	0.98	0.43	1.46	3
April-------	64.8	35.0	79.9	83	21	294	0.93	0.28	1.50	2
May---------	74.5	42.5	58.5	93	27	572	0.91	0.33	1.43	3
June--------	83.0	49.7	66.3	100	34	788	0.82	0.36	1.38	2
July--------	92.2	54.1	73.2	104	40	1,002	0.18	0.06	0.45	0
August------	90.2	51.5	70.8	103	39	953	0.34	0.12	0.74	0
September---	79.8	42.6	61.2	96	27	648	0.50	0.15	0.94	1
October-----	66.2	33.3	49.7	83	17	316	0.74	0.22	1.31	2
November----	49.6	27.5	38.5	66	8	63	1.51	0.58	2.29	4
December----	37.7	20.7	29.2	55	-7	6	1.63	0.70	2.42	5
Yearly:										
Average---	64.3	35.6	49.9	---	---	---	---	---	---	---
Extreme---	107	-29	---	106	-17	---	---	---	---	---
Total-----	---	---	---	---	---	4,791	11.29	5.26	13.87	30

* A growing degree day is a unit of heat available for plant growth. It can be calculated by adding the maximum and minimum daily temperatures, dividing the sum by 2, and subtracting the temperature below which growth is minimal for the principal crops in the area (Threshold: 40 degrees F).

Table 2.--Freeze Dates in Spring and Fall

(Recorded in the period 1931-90 at Cambridge, New Meadows, and Weiser, Idaho)

Probability	Temperature		
	24 °F	28 °F	32 °F
Cambridge			
Last freezing temperature in spring:			
1 year in 10 later than--	May 12	June 9	July 13
2 years in 10 later than--	May 2	May 28	June 29
5 years in 10 later than--	April 14	May 6	June 1
First freezing temperature in fall:			
1 year in 10 earlier than--	Sept. 22	Sept. 11	Sept. 1
2 years in 10 earlier than--	Sept. 28	Sept. 18	Sept. 6
5 yrars in 10 earlier than--	Oct. 11	Sept. 29	Sept. 16
New Meadows			
Last freezing temperature in spring:			
1 year in 10 later than--	June 10	Aug. 20	Sept. 17
2 years in 10 later than--	June 3	Aug. 3	Sept. 5
5 years in 10 later than--	May 20	July 2	Aug. 13
First freezing temperature in fall:			
1 year in 10 earlier than--	Sept. 5	Aug. 24	Aug. 3
2 years in 10 earlier than--	Sept. 10	Aug. 29	Aug. 8
5 years in 10 earlier than--	Sept. 19	Sept. 7	Aug. 19
Weiser			
Last freezing temperature in spring:			
1 year in 10 later than--	April 30	May 16	June 2
2 years in 10 later than--	April 23	May 10	May 26
5 years in 10 later than--	April 9	April 28	May 14
First freezing temperature in fall:			
1 year in 10 earlier than--	Oct. 1	Sept. 20	Sept. 14
2 years in 10 earlier than--	Oct. 6	Sept. 26	Sept. 18
5 years in 10 earlier than--	Oct. 16	Oct. 7	Sept. 25

Table 3.--Growing Season

(Recorded in the period 1930-90 at Cambridge, New Meadows, and Weiser, Idaho)

Probability	Daily minimum temperature during growing season		
	Higher than 24 °F	Higher than 28 °F	Higher than 32 °F
	Days	Days	Days
Cambridge			
9 years in 10	160	130	84
8 years in 10	173	144	102
5 years in 10	198	171	137
2 years in 10	223	198	173
1 year in 10	237	213	191
New Meadows			
9 years in 10	107	23	-10
8 years in 10	115	43	6
5 years in 10	130	82	37
2 years in 10	145	122	68
1 year in 10	153	142	84
Weiser			
9 years in 10	181	162	143
8 years in 10	190	170	150
5 years in 10	209	185	164
2 years in 10	228	201	178
1 year in 10	238	209	186

Table 4.--Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Adams County	Washington County	Total-- Area	Extent
		Acres	Acres	Acres	Pct
1	Abo silt loam, 0 to 2 percent slopes	0	837	837	0.1
2	Agerdelly clay, 4 to 30 percent slopes	0	3,941	3,941	0.4
3	Agerdelly clay, 30 to 60 percent slopes	0	1,997	1,997	0.2
4	Agerdelly-Devnot complex, 4 to 30 percent slopes	0	3,485	3,485	0.3
5	Agerdelly-Devnot complex, 30 to 60 percent slopes	0	3,192	3,192	0.3
6	Appledellia loam, 2 to 4 percent slopes	2,342	1,471	3,813	0.3
7	Appledellia loam, 4 to 8 percent slopes	2,709	118	2,827	0.3
8	Appledellia clay loam, 12 to 30 percent slopes	0	561	561	0.1
9	Appledellia-Appleshall complex, 2 to 15 percent slopes	754	2,776	3,530	0.3
10	Appledellia-Appleshall complex, moist, 2 to 15 percent slopes	1,075	0	1,075	0.1
11	Appledellia-Odermott complex, 2 to 4 percent slopes	467	0	467	*
12	Appledellia-Odermott complex, 4 to 8 percent slopes	1,221	0	1,221	0.1
13	Bakeoven-Reywat complex, 2 to 30 percent slopes	1,933	47,282	49,215	4.5
14	Bakeoven-Reywat-Rock outcrop complex, 30 to 60 percent slopes	197	39,579	39,776	3.6
15	Baldock silt loam, 0 to 2 percent slopes	0	3,269	3,269	0.3
16	Baldock clay loam, 0 to 2 percent slopes	0	1,215	1,215	0.1
17	Bissell loam, 0 to 2 percent slopes	0	3,827	3,827	0.3
18	Bissell loam, 2 to 4 percent slopes	0	1,572	1,572	0.1
19	Blackwell clay loam, 0 to 5 percent slopes	5,271	0	5,271	0.5
20	Bluebell cobbly loam, 5 to 35 percent slopes	8,901	0	8,901	0.8
21	Bluebell cobbly loam, 35 to 65 percent slopes	23,612	0	23,612	2.1
22	Bluesprin family, 30 to 60 percent slopes	625	0	625	0.1
23	Brody-Culdecole complex, 30 to 65 percent slopes	4,544	0	4,544	0.4
24	Brownlee sandy loam, 4 to 8 percent slopes	1,293	2,703	3,996	0.4
25	Brownlee sandy loam, 8 to 20 percent slopes	1,509	3,782	5,291	0.5
26	Brownlee sandy loam, 20 to 35 percent slopes	2,865	3,144	6,009	0.5
27	Brownlee loam, 1 to 4 percent slopes	58	2,050	2,108	0.2
28	Bryan coarse sandy loam, 40 to 60 percent slopes	658	0	658	0.1
29	Cabarton silty clay loam, 0 to 5 percent slopes	1,274	0	1,274	0.1
30	Cashmere sandy loam, 2 to 4 percent slopes	0	503	503	*
31	Cashmere sandy loam, 4 to 8 percent slopes	0	658	658	0.1
32	Catherine silt loam, 0 to 3 percent slopes	2,128	1,233	3,361	0.3
33	Chilcott-Vickery silt loams, 4 to 12 percent slopes	0	832	832	0.1
34	Clems fine sandy loam, 0 to 2 percent slopes	0	1,014	1,014	0.1
35	Clems fine sandy loam, 2 to 4 percent slopes	0	384	384	*
36	Cranecreek loam, 4 to 12 percent slopes	250	557	807	0.1
37	Cranecreek-Reywat complex, 2 to 25 percent slopes	2,413	13,928	16,341	1.5
38	Culdecole-Brody complex, 4 to 30 percent slopes	1,216	0	1,216	0.1
39	Dagor loam, 2 to 4 percent slopes	675	1,121	1,796	0.2
40	Demast loam, 10 to 30 percent slopes	2,296	0	2,296	0.2
41	Demast loam, 30 to 60 percent slopes	6,600	0	6,600	0.6
42	Demasters loam, 30 to 50 percent slopes	4,607	17,906	22,513	2.0
43	Demasters loam, 50 to 75 percent slopes	374	3,455	3,829	0.3
44	Demoss loam, 2 to 8 percent slopes	135	834	969	0.1
45	Deshler silty clay loam, 2 to 8 percent slopes	945	7,475	8,420	0.8
46	Deshler silty clay loam, 8 to 20 percent slopes	2,162	7,238	9,400	0.9
47	Deshler silty clay loam, 20 to 30 percent slopes	558	6,364	6,922	0.6
48	Deshler silty clay loam, 30 to 60 percent slopes	814	6,466	7,280	0.7
49	Deshler extremely stony clay loam, 2 to 30 percent slopes	229	9,085	9,314	0.8
50	Deshler extremely stony clay loam, 30 to 60 percent slopes	0	7,859	7,859	0.7
51	Deshler-Agerdelly complex, 8 to 30 percent slopes	0	6,202	6,202	0.6
52	Deshler-Agerdelly complex, 30 to 60 percent slopes	0	2,633	2,633	0.2
53	Deshler-Agerdelly complex, extremely stony, 2 to 30 percent slopes	0	4,293	4,293	0.4
54	Deshler-Agerdelly complex, extremely stony, 30 to 60 percent slopes	0	2,492	2,492	0.2
55	Deshler-Brownlee complex, 2 to 8 percent slopes	713	3,120	3,833	0.3
56	Deshler-Brownlee complex, 8 to 20 percent slopes	651	5,902	6,553	0.6
57	Deshler-Brownlee complex, 20 to 30 percent slopes	2,296	4,686	6,982	0.6
58	Deshler-Devnot complex, 2 to 30 percent slopes	375	14,610	14,985	1.4
59	Deshler-Devnot complex, 30 to 60 percent slopes	0	1,840	1,840	0.2

See footnote at end of table.

Table 4.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Adams County	Washington County	Total-- Area	Total-- Extent
		Acres	Acres	Acres	Pct
60	Deterson silt loam, 30 to 60 percent slopes	9	3,509	3,518	0.3
61	Deterson clay loam, 5 to 30 percent slopes	16	4,414	4,430	0.4
62	Dishner-Haw complex, 2 to 30 percent slopes	0	649	649	0.1
63	Donnel sandy loam, 0 to 4 percent slopes	1,059	0	1,059	0.1
64	Duneland	0	225	225	*
65	Elijah silt loam, 4 to 8 percent slopes	0	312	312	*
66	Elijah silt loam, 8 to 12 percent slopes	0	308	308	*
67	Falk fine sandy loam, 0 to 2 percent slopes	0	684	684	0.1
68	Gem stony clay loam, 2 to 30 percent slopes	0	14,391	14,391	1.3
69	Gem stony clay loam, 30 to 60 percent slopes	0	1,830	1,830	0.2
70	Gem extremely stony clay loam, 2 to 30 percent slopes	0	1,800	1,800	0.2
71	Gem-Bakeoven complex, 2 to 30 percent slopes	1,068	31,338	32,406	2.9
72	Gem-Bakeoven complex, 30 to 60 percent slopes	24	14,009	14,033	1.3
73	Gem-Reywat complex, 2 to 30 percent slopes	2,201	61,051	63,252	5.7
74	Gem-Reywat complex, 30 to 65 percent slopes	112	50,074	50,186	4.5
75	Gestrin loam, 2 to 4 percent slopes	535	0	535	*
76	Gestrin loam, 4 to 8 percent slopes	1,513	0	1,513	0.1
77	Glasgow clay loam, 2 to 4 percent slopes	0	222	222	*
78	Glasgow clay loam, 8 to 20 percent slopes	0	1,450	1,450	0.1
79	Glasgow clay loam, 20 to 60 percent slopes	0	7,918	7,918	0.7
80	Glasgow-Lankbush complex, 12 to 30 percent slopes	0	1,509	1,509	0.1
81	Glasgow-Lankbush complex, 30 to 60 percent slopes	0	4,341	4,341	0.4
82	Greenleaf silt loam, 0 to 2 percent slopes	0	3,962	3,962	0.4
83	Greenleaf silt loam, 2 to 4 percent slopes	0	2,781	2,781	0.3
84	Greenleaf silt loam, 4 to 8 percent slopes	0	1,392	1,392	0.1
85	Greenleaf silt loam, 8 to 12 percent slopes	0	744	744	0.1
86	Gross loam, 30 to 65 percent slopes	0	2,626	2,626	0.2
87	Gross silt loam, 30 to 65 percent slopes	0	12,135	12,135	1.1
88	Gross-Bakeoven complex, 30 to 65 percent slopes	0	10,293	10,293	0.9
89	Gross-Bakeoven complex, 30 to 65 percent slopes, stony	0	8,962	8,962	0.8
90	Gwin-Rock outcrop complex, 40 to 65 percent slopes	3,127	0	3,127	0.3
91	Harpt loam, 2 to 4 percent slopes	0	592	592	0.1
92	Harpt loam, 4 to 8 percent slopes	0	810	810	0.1
93	Haw silt loam, 4 to 8 percent slopes	0	2,549	2,549	0.2
94	Haw silt loam, 8 to 12 percent slopes	0	3,525	3,525	0.3
95	Haw silt loam, 12 to 30 percent slopes	0	6,380	6,380	0.6
96	Haw silt loam, 30 to 60 percent slopes	0	5,535	5,535	0.5
97	Jacknife loam, 1 to 4 percent slopes	983	287	1,270	0.1
98	Jacknife loam, 4 to 8 percent slopes	1,707	1,035	2,742	0.2
99	Jacknife loam, 8 to 12 percent slopes	625	338	963	0.1
100	Jacknife loam, 12 to 30 percent slopes	720	298	1,018	0.1
101	Jacknife very stony loam, 4 to 30 percent slopes	177	1,499	1,676	0.2
102	Jenny clay, 0 to 2 percent slopes	0	1,855	1,855	0.2
103	Johnson coarse sandy loam, 30 to 65 percent slopes	282	0	282	*
104	Jughandle sandy loam, 30 to 60 percent slopes	814	0	814	0.1
105	Jughandle-Suttler association, 40 to 90 percent slopes	2,070	0	2,070	0.2
106	Kangas coarse sandy loam, 0 to 2 percent slopes	886	0	886	0.1
107	Klicker stony loam, 30 to 60 percent slopes	10,661	7,200	17,861	1.6
108	Klickson silt loam, 30 to 60 percent slopes	765	0	765	0.1
109	Klickson-Rock outcrop complex, 40 to 90 percent slopes	1,166	0	1,166	0.1
110	Langrell loam, 0 to 2 percent slopes	5,485	1,519	7,004	0.6
111	Langrell gravelly loam, 0 to 3 percent slopes	49	3,543	3,592	0.3
112	Lankbush sandy loam, 2 to 4 percent slopes	0	473	473	*
113	Lankbush sandy loam, 4 to 8 percent slopes	0	603	603	0.1
114	Lankbush sandy loam, 8 to 12 percent slopes	0	423	423	*
115	Lankbush sandy loam, 12 to 30 percent slopes	0	4,183	4,183	0.4
116	Lanktree loam, 0 to 2 percent slopes	0	742	742	0.1
117	Lanktree loam, 2 to 30 percent slopes	0	2,995	2,995	0.3
118	Lanktree clay loam, 4 to 8 percent slopes	0	364	364	*
119	Lanktree very cobbly loam, 2 to 30 percent slopes	0	430	430	*
120	Lanktree-Lankbush complex, 30 to 60 percent slopes	0	3,717	3,717	0.3
121	Ligget sandy loam, 5 to 30 percent slopes	671	0	671	0.1
122	Ligget sandy loam, 30 to 60 percent slopes	2,676	0	2,676	0.2

See footnote at end of table.

Table 4.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Adams County	Washington County	Total-- Area	Total-- Extent
		Acres	Acres	Acres	Pct
123	Lolalita sandy loam, 4 to 8 percent slopes	0	427	427	*
124	Lolalita sandy loam, 8 to 12 percent slopes	0	556	556	0.1
125	Lolalita sandy loam, 12 to 30 percent slopes	0	771	771	0.1
126	Lolalita-Glasgow complex, 30 to 60 percent slopes	0	2,069	2,069	0.2
127	Lolalita-Saralegui complex, 30 to 60 percent slopes	0	5,936	5,936	0.5
128	Lorella-Rock outcrop complex, 30 to 50 percent slopes	1,440	414	1,854	0.2
129	Lorella-Rock outcrop complex, 50 to 65 percent slopes	0	4,142	4,142	0.4
130	McDaniel stony loam, 10 to 60 percent slopes	1,353	0	1,353	0.1
131	McDaniel-Rockly complex, 10 to 70 percent slopes	3,763	0	3,763	0.3
132	McDaniel-Starveout complex, 10 to 60 percent slopes	3,394	0	3,394	0.3
133	Meland silt loam, 4 to 8 percent slopes	3,613	713	4,326	0.4
134	Meland silt loam, 8 to 12 percent slopes	1,840	412	2,252	0.2
135	Meland silt loam, 12 to 30 percent slopes	1,636	1,171	2,807	0.3
136	Meland very stony loam, 4 to 30 percent slopes	117	697	814	0.1
137	Meland-Riggins complex, 4 to 30 percent slopes	29,552	28,216	57,768	5.2
138	Meland-Riggins complex, 30 to 60 percent slopes	29,193	28,878	58,071	5.3
139	Melton loam, 0 to 2 percent slopes	1,703	0	1,703	0.2
140	Melton-Roseberry complex, 0 to 2 percent slopes	2,036	0	2,036	0.2
141	Midvale silty clay loam, 0 to 2 percent slopes	275	2,646	2,921	0.3
142	Midvale silty clay loam, 2 to 4 percent slopes	516	2,779	3,295	0.3
143	Midvale silty clay loam, 4 to 8 percent slopes	247	2,795	3,042	0.3
144	Midvale silty clay loam, 8 to 12 percent slopes	0	687	687	0.1
145	Midvale silty clay loam, 12 to 20 percent slopes	0	259	259	*
146	Midvale-Demoss complex, 2 to 4 percent slopes	114	2,603	2,717	0.2
147	Molly-Littlesalmon complex, 30 to 60 percent slopes	969	0	969	0.1
148	Molly-Littlesalmon-Rock outcrop complex, 60 to 75 percent slopes	1,534	0	1,534	0.1
149	Moonstone coarse sandy loam, 30 to 60 percent slopes	0	789	789	0.1
150	Moulton fine sandy loam, 0 to 3 percent slopes	0	601	601	0.1
151	Moulton loam, 0 to 3 percent slopes	0	1,376	1,376	0.1
152	Moulton-Falk fine sandy loams, 0 to 3 percent slopes	0	629	629	0.1
153	Mulett-Mackey complex, 30 to 60 percent slopes	0	8,414	8,414	0.8
154	Nazaton-Naz complex, 40 to 90 percent slopes	731	0	731	0.1
155	Newell clay loam, 0 to 2 percent slopes	640	8,705	9,345	0.8
156	Newell clay loam, 2 to 4 percent slopes	33	4,248	4,281	0.4
157	Newell clay loam, 4 to 8 percent slopes	0	660	660	0.1
158	Newell stony clay loam, 2 to 12 percent slopes	172	990	1,162	0.1
159	Notus sandy loam, 0 to 3 percent slopes	0	684	684	0.1
160	Nyssaton silt loam, 0 to 2 percent slopes	0	596	596	0.1
161	Odarmott-Appledellia complex, 12 to 30 percent slopes	316	0	316	*
162	Oldsferry shaly loam, 25 to 65 percent slopes	0	12,902	12,902	1.2
163	Onyx silt loam, 0 to 3 percent slopes	9	1,020	1,029	0.1
164	Owyhee silt loam, 0 to 2 percent slopes	0	289	289	*
165	Owyhee silt loam, 2 to 4 percent slopes	0	271	271	*
166	Owyhee silt loam, 4 to 8 percent slopes	0	374	374	*
167	Owyhee silt loam, 8 to 12 percent slopes	0	273	273	*
168	Owyhee silt loam, 12 to 20 percent slopes	0	988	988	0.1
169	Paniogue loam, 0 to 2 percent slopes	0	661	661	0.1
170	Payette coarse sandy loam, 12 to 30 percent slopes	0	430	430	*
171	Payette coarse sandy loam, 30 to 60 percent slopes	0	957	957	0.1
172	Payette-Van Dusen association, 30 to 60 percent slopes	0	8,882	8,882	0.8
173	Power-Purdam silt loams, 0 to 2 percent slopes	0	3,024	3,024	0.3
174	Power-Purdam silt loams, 2 to 4 percent slopes	0	259	259	*
175	Power-Purdam silt loams, 4 to 8 percent slopes	0	1,134	1,134	0.1
176	Riggins extremely stony loam, 4 to 30 percent slopes	10,414	23,362	33,776	3.1
177	Riggins extremely stony loam, 30 to 50 percent slopes	23,978	23,665	47,643	4.3
178	Riggins extremely stony loam, 50 to 75 percent slopes	698	5,150	5,848	0.5
179	Riverwash	105	747	852	0.1
180	Rock outcrop-Bakeoven complex, 60 to 80 percent slopes	21	12,181	12,202	1.1
181	Rockly very stony loam, 12 to 60 percent slopes	838	0	838	0.1
182	Rockly-Riggins complex, 4 to 30 percent slopes	16,555	956	17,511	1.6
183	Rockly-Riggins complex, 30 to 65 percent slopes	3,504	1,336	4,840	0.4
184	Rockly-Rock outcrop complex, 10 to 50 percent slopes	4,227	0	4,227	0.4

See footnote at end of table.

Table 4.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Adams County	Washington County	Total-- Area	Total-- Extent
		Acres	Acres	Acres	Pct
185	Rockly-Starveout-McDaniel association, 3 to 70 percent slopes	2,091	0	2,091	0.2
186	Roseberry loam, 0 to 2 percent slopes	409	0	409	*
187	Shellrock-Rock outcrop complex, 12 to 35 percent slopes	226	0	226	*
188	Shellrock-Rock outcrop complex, 35 to 60 percent slopes	720	0	720	0.1
189	Shoepeg loam, 0 to 3 percent slopes	1,545	7,538	9,083	0.8
190	Shoepeg silty clay loam, 0 to 3 percent slopes	3,042	4,154	7,196	0.7
191	Starveout-Gwin-McDaniel association, 3 to 45 percent slopes	1,133	0	1,133	0.1
192	Sudpeak loam, 3 to 20 percent slopes	1,274	0	1,274	0.1
193	Swede loam, 4 to 12 percent slopes	6,664	0	6,664	0.6
194	Tamred loam, 20 to 60 percent slopes	1,379	0	1,379	0.1
195	Ticanot very cobbly loam, 4 to 65 percent slopes	14,254	0	14,254	1.3
196	Tindahay-Cashmere complex, 2 to 4 percent slopes	0	593	593	0.1
197	Tindahay-Cashmere complex, 4 to 8 percent slopes	0	652	652	0.1
198	Tindahay-Cashmere complex, 8 to 12 percent slopes	0	846	846	0.1
199	Typic Xerofluvents, cobbly, 4 to 40 percent slopes	346	0	346	*
200	Van Dusen-Haw complex, 30 to 65 percent slopes	0	914	914	0.1
201	Wapshilla loam, 30 to 60 percent slopes	1,075	0	1,075	0.1
W	Water	2,220	12,500	14,720	1.3
	Total	312,060	793,236	1,105,296	100.0

* Less than 0.1 percent.

Table 5.--Yields per Acre of Crops and Pasture

(Yields in the N columns are for nonirrigated soils; those in the I columns are for irrigated soils. Yields are those that can be expected under a high level of management. Only the soils suited to crops and pasture are listed. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)

Soil name and map symbol	Wheat		Alfalfa hay		Corn silage		Pasture		Sugar beets		Irish potatoes	
	N	I	N	I	N	I	N	I	N	I	N	I
	Bu	Bu	Tons	Tons	Tons	Tons	AUM*	AUM*	Tons	Tons	Cwt	Cwt
1---------- Abo	---	55	---	5	---	25	---	18	---	24	---	---
2---------- Agerdelly	---	---	---	---	---	---	1.0	---	---	---	---	---
3---------- Agerdelly	---	---	---	---	---	---	0.8	---	---	---	---	---
6---------- Appledellia	---	80	1.0	5.5	---	---	2.5	14.0	---	---	---	---
7---------- Appledellia	---	80	1.0	5.5	---	---	2.5	14.0	---	---	---	---
8---------- Appledellia	---	65	0.5	3.5	---	---	1.0	8.5	---	---	---	---
11**---------- Appledellia-Odermott	40	82	2.0	5.5	---	---	5.1	14.0	---	---	---	---
12**---------- Appledellia-Odermott	40	82	2.0	5.5	---	---	5.0	14.0	---	---	---	---
15, 16---------- Baldock	---	55	---	4.5	---	14	6	11	---	23	---	---
17---------- Bissell	---	110	---	---	---	26	1.5	18	---	30	---	380
18---------- Bissell	---	110	---	---	---	26	1.5	18	---	30	---	380
24---------- Brownlee	30	65	1.7	4.5	---	18	3.0	13	---	---	---	---
25---------- Brownlee	---	---	1.3	---	---	---	2.5	---	---	---	---	---
27---------- Brownlee	40	65	2.0	5.0	---	20	3.0	15	---	---	---	---
30---------- Cashmere	---	---	---	6.0	---	---	---	12	---	---	---	---
31---------- Cashmere	---	---	---	6.0	---	---	---	10	---	---	---	---
32---------- Catherine	---	---	---	5	---	---	---	16	---	---	---	---
33**---------- Chilcott-Vickery	---	---	---	3.8	---	15	---	---	---	---	---	---
34---------- Clems	---	90	---	5.5	---	23	---	18	---	26	---	380

See footnotes at end of table.

Table 5.--Yields per Acre of Crops and Pasture--Continued

Soil name and map symbol	Wheat		Alfalfa hay		Corn silage		Pasture		Sugar beets		Irish potatoes	
	N	I	N	I	N	I	N	I	N	I	N	I
	Bu	Bu	Tons	Tons	Tons	Tons	AUM*	AUM*	Tons	Tons	Cwt	Cwt
35---------- Clems	---	75	---	4.5	---	18	---	18	---	18	---	345
36---------- Cranecreek	20	90	1.6	5.0	---	---	4.0	12.5	---	---	---	---
39---------- Dagor	---	70	---	5.5	---	---	---	11	---	---	---	---
44---------- Demoss	15	30	1.5	2.5	---	---	3.5	6.0	---	---	---	---
45---------- Deshler	23	100	1.5	6.0	---	---	2.5	13	---	---	---	---
46---------- Deshler	23	70	1.5	4.5	---	---	2.5	10	---	---	---	---
47, 48---------- Deshler	---	---	1.0	---	---	---	2.0	---	---	---	---	---
51**---------- Deshler-Agardelly	---	---	---	---	---	---	1.9	---	---	---	---	---
52**---------- Deshler-Agardelly	---	---	---	---	---	---	1.5	---	---	---	---	---
55**---------- Deshler-Brownlee	26	85	1.5	5.4	---	---	2.7	13	---	---	---	---
56**---------- Deshler-Brownlee	---	---	1.4	---	---	---	2.5	---	---	---	---	---
63---------- Donnel	---	---	---	---	---	---	5	7	---	---	---	90
65---------- Elijah	---	---	---	4.5	---	19	---	---	---	22	---	275
66---------- Elijah	---	---	---	3.5	---	15	---	---	---	---	---	---
67---------- Falk	---	95	---	4.5	---	28	---	11	---	---	---	300
75---------- Gestrin	---	---	---	---	---	---	6.0	8.0	---	---	---	---
76---------- Gestrin	---	---	---	---	---	---	5.0	6.0	---	---	---	---
82---------- Greenleaf	---	82	---	7.0	---	26	---	17	---	32	---	360
83---------- Greenleaf	---	76	---	6.0	---	23	---	17	---	30	---	370
84---------- Greenleaf	---	84	---	6.5	---	20	---	16	---	24	---	350
85---------- Greenleaf	---	57	---	4.0	---	16	---	12	---	17	---	235

See footnotes at end of table.

Table 5.--Yields per Acre of Crops and Pasture--Continued

Soil name and map symbol	Wheat		Alfalfa hay		Corn silage		Pasture		Sugar beets		Irish potatoes	
	N	I	N	I	N	I	N	I	N	I	N	I
	Bu	Bu	Tons	Tons	Tons	Tons	AUM*	AUM*	Tons	Tons	Cwt	Cwt
86, 87 Gross	---	---	---	---	---	---	1.3	---	---	---	---	---
91 Harpt	---	110	---	---	---	25	---	16	---	28	---	370
92 Harpt	---	100	---	---	---	20	---	15	---	23	---	345
93 Haw	---	80	---	5.5	---	22	---	14.0	---	24	---	300
94 Haw	---	55	---	4.0	---	---	---	10.0	---	---	---	---
97 Jacknife	35	100	2.0	5.5	---	---	6.5	16	---	---	---	---
98 Jacknife	26	90	1.8	5.0	---	---	6.0	14	---	---	---	---
99 Jacknife	20	85	1.8	4.2	---	---	6.0	12	---	---	---	---
100 Jacknife	---	---	---	---	---	---	4.5	---	---	---	---	---
102 Jenny	---	100	---	6.5	---	---	---	16	---	24	---	---
106 Kangas	---	---	---	---	---	---	1.0	3.0	---	---	---	---
110 Langrell	---	---	---	4	---	8.8	1	10	---	---	---	---
111 Langrell	---	---	---	---	---	---	3	15	---	---	---	---
112 Lankbush	---	100	---	6	---	24	---	15	---	---	---	300
113 Lankbush	---	90	---	5	---	22	---	13	---	---	---	260
114 Lankbush	---	80	---	4	---	22	---	10	---	---	---	210
116 Lanktree	---	105	---	6.5	---	25	---	16	---	23	---	---
117 Lanktree	---	---	---	5.0	---	---	---	14	---	---	---	---
118 Lanktree	---	100	---	6.0	---	20	---	15	---	20	---	---
123 Lolalita	---	70	---	4.0	---	16	0.8	13	---	---	---	335
124 Lolalita	---	55	---	3.5	---	---	0.8	8	---	---	---	---

See footnotes at end of table.

Table 5.--Yields per Acre of Crops and Pasture--Continued

Soil name and map symbol	Wheat		Alfalfa hay		Corn silage		Pasture		Sugar beets		Irish potatoes	
	N	I	N	I	N	I	N	I	N	I	N	I
	Bu	Bu	Tons	Tons	Tons	Tons	AUM*	AUM*	Tons	Tons	Cwt	Cwt
125---------- Lolalita	---	---	---	---	---	---	0.7	---	---	---	---	---
127**---------- Lolalita-Saralegui	---	---	---	---	---	---	0.5	---	---	---	---	---
133---------- Meland	50	100	1.5	5.0	---	---	3.0	12.0	---	---	---	---
134---------- Meland	50	100	1.5	5.0	---	---	3.0	12.0	---	---	---	---
135---------- Meland	50	95	1.5	4.5	---	---	3.0	11.0	---	---	---	---
141---------- Midvale	45	85	4.0	6.0	---	---	10.0	15.0	---	---	---	---
142---------- Midvale	45	85	4.0	6.0	---	---	10.0	15.0	---	---	---	---
143---------- Midvale	40	80	3.0	5.0	---	---	7.5	12.5	---	---	---	---
144---------- Midvale	35	75	3.0	5.0	---	---	7.5	12.5	---	---	---	---
145---------- Midvale	30	70	2.5	4.5	---	---	6.0	11.0	---	---	---	---
146**---------- Midvale-Demoss	33	62	3.0	4.5	---	---	7.3	11.4	---	---	---	---
150, 151---------- Moulton	---	90	---	5.0	---	30	---	12	---	25	---	---
152**---------- Moulton-Falk	---	93	---	4.8	---	29	---	11	---	---	---	---
155---------- Newell	30	110	2.0	7.0	---	26	4.0	20	---	---	---	---
156---------- Newell	30	110	2.0	7.0	---	26	4.0	20	---	---	---	---
157---------- Newell	28	100	1.5	6.0	---	25	3.5	18	---	---	---	---
158---------- Newell	---	---	1.5	6.0	---	---	3.5	16	---	---	---	---
159---------- Notus	---	---	---	3	---	10	---	7	---	---	---	---
160---------- Nyssaton	---	110	---	7	---	---	---	20	---	---	---	380
161**---------- Odarmott-Appledellia	---	---	1.3	---	---	---	2.8	---	---	---	---	---

See footnotes at end of table.

Table 5.--Yields per Acre of Crops and Pasture--Continued

Soil name and map symbol	Wheat		Alfalfa hay		Corn silage		Pasture		Sugar beets		Irish potatoes	
	N	I	N	I	N	I	N	I	N	I	N	I
	Bu	Bu	Tons	Tons	Tons	Tons	AUM*	AUM*	Tons	Tons	Cwt	Cwt
163---------- Onyx	50	100	2.5	6	---	---	---	---	---	---	---	---
164---------- Owyhee	---	105	---	7.0	---	32	---	20	---	32	---	425
165---------- Owyhee	---	90	---	6.0	---	20	---	16	---	30	---	400
166---------- Owyhee	---	80	---	5	---	---	---	14	---	28	---	350
167---------- Owyhee	---	80	---	4.5	---	---	---	10	---	28	---	350
168---------- Owyhee	---	---	---	3.0	---	---	---	6	---	28	---	350
169---------- Paniogue	---	100	---	6.5	---	---	---	16	---	23	---	320
173**---------- Power-Purdam	---	100	---	6	---	---	---	17	---	29	---	362
174**---------- Power-Purdam	---	100	---	6	---	---	---	17	---	27	---	349
175**---------- Power-Purdam	---	91	---	4	---	---	---	13	---	23	---	319
186---------- Roseberry	---	---	---	---	---	---	3.0	4.5	---	---	---	---
189, 190---------- Shoepeg	---	110	---	5.0	---	22	---	13.0	---	---	---	---
193---------- Swede	---	---	---	---	---	---	5.0	6.0	---	---	---	---
196---------- Tindahay-Cashmere	---	---	---	5.0	---	---	---	11	---	---	---	---
197---------- Tindahay-Cashmere	---	---	---	5.0	---	---	---	11	---	---	---	---
198---------- Tindahay-Cashmere	---	---	---	5.3	---	---	---	13	---	---	---	---

* Animal-unit-month: The amount of forage or feed required to feed one animal unit (one cow, one horse, one mule, five sheep, or five goats) for 30 days.

** See description of the map unit for composition and behavior characteristics of the map unit.

Table 6.--Rangeland Productivity and Characteristic Plant Communities

(Only the soils that support rangeland vegetation suitable for grazing are listed)

Soil name and map symbol	Range site	Total production		Characteristic vegetation	Composition
		Kind of year	Dry weight		
			Lb/acre		Pct
2, 3---------- Agerdelly	010xy006i Churning Clay 11-16" Ppt Artrx/agsp.	Favorable	700	Bluebunch wheatgrass----------	25
		Normal	500	Big sagebrush----------	20
		Unfavorable	400	Sandberg bluegrass----------	10
				Tapertip hawksbeard----------	10
				Tall gray rabbitbrush---------	10
				Nevada bluegrass----------	5
4*, 5*:					
Agerdelly---------	010xy006i Churning Clay 11-16" Ppt Artrx/agsp.	Favorable	700	Bluebunch wheatgrass----------	25
		Normal	500	Big sagebrush----------	20
		Unfavorable	400	Sandberg bluegrass----------	10
				Tapertip hawksbeard----------	10
				Tall gray rabbitbrush---------	10
				Nevada bluegrass----------	5
Devnot----------	010xy002i Very Shallow 12-20" Ppt Arri2/posa12.	Favorable	200	Stiff sagebrush----------	35
		Normal	125	Sandberg bluegrass----------	25
		Unfavorable	75	Slenderbush eriogonum---------	10
				Bottlebrush squirreltail------	5
				Phlox----------	5
				Biscuitroot----------	5
8---------- Appledellia	010xy003i Loamy 16-20" Ppt Putr2/feid.	Favorable	1,600	Bluebunch wheatgrass----------	20
		Normal	1,200	Idaho fescue----------	20
		Unfavorable	800	Antelope bitterbrush----------	15
				Arrowleaf balsamroot----------	10
				Nevada bluegrass----------	5
				Big sagebrush----------	5
				Eriogonum----------	5
				Penstemon----------	5
9*:					
Appledellia-------	010xy003i Loamy 16-20" Ppt Putr2/feid.	Favorable	1,600	Bluebunch wheatgrass----------	20
		Normal	1,200	Idaho fescue----------	20
		Unfavorable	800	Antelope bitterbrush----------	15
				Arrowleaf balsamroot----------	10
				Nevada bluegrass----------	5
				Big sagebrush----------	5
				Eriogonum----------	5
				Penstemon----------	5
Appleshall--------	010xy002i Very Shallow 12-20" Ppt Arri2/posa12.	Favorable	200	Sandberg bluegrass----------	35
		Normal	125	Stiff sagebrush----------	35
		Unfavorable	75	Bluebunch wheatgrass----------	5
				Bottlebrush squirreltail------	5
				Phlox----------	5
				Hooker balsamroot----------	5
				Slenderbush eriogonum---------	5
10*:					
Appledellia-------	043ay003i Loamy 22+" Ppt Agsp/feid.	Favorable	2,500	Bluebunch wheatgrass----------	20
		Normal	2,000	Idaho fescue----------	20
		Unfavorable	1,500	Slender wheatgrass----------	20
				Arrowleaf balsamroot----------	5
				Eriogonum----------	5
				Lupine----------	5
				Mountain big sagebrush--------	5

See footnote at end of table.

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Soil name and map symbol	Range site	Total production		Characteristic vegetation	Composition
		Kind of year	Dry weight		
			lb/acre		Pct
10*:					
Appleshall	010xy002i Very Shallow 12-20" Ppt Arri2/posa12.	Favorable	200	Sandberg bluegrass	35
		Normal	125	Stiff sagebrush	35
		Unfavorable	75	Bluebunch wheatgrass	5
				Bottlebrush squirreltail	5
				Phlox	5
				Hooker balsamroot	5
				Slenderbush eriogonum	5
13*:					
Bakeoven	010xy002i Very Shallow 12-20" Ppt Arri2/posa12.	Favorable	200	Sandberg bluegrass	35
		Normal	125	Stiff sagebrush	35
		Unfavorable	75	Eriogonum	10
				Bluebunch wheatgrass	5
				Phlox	5
Reywat	010xy025i Shallow Stony Loam 12-16" Ppt Artrx/agsp.	Favorable	900	Bluebunch wheatgrass	40
		Normal	600	Big sagebrush	15
		Unfavorable	300	Sandberg bluegrass	5
				Tapertip hawksbeard	5
				Arrowleaf balsamroot	5
				Antelope bitterbrush	5
				Thurber needlegrass	5
14*:					
Bakeoven	010xy002i Very Shallow 12-20" Ppt Arri2/posa12.	Favorable	200	Sandberg bluegrass	35
		Normal	125	Stiff sagebrush	35
		Unfavorable	75	Eriogonum	10
				Bluebunch wheatgrass	5
				Phlox	5
Reywat	010xy016i Shallow South Stony 12-16" Ppt Artrx/ags.	Favorable	650	Bluebunch wheatgrass	30
		Normal	400	Big sagebrush	15
		Unfavorable	300	Sandberg bluegrass	10
				Tapertip hawksbeard	5
				Arrowleaf balsamroot	5
				Bottlebrush squirreltail	5
				Antelope bitterbrush	5
Rock outcrop.					
19 Blackwell	043xy003i Wet Meadow	Favorable	5,000	Sedge	25
		Normal	4,000	Willow	20
		Unfavorable	3,000	Tufted hairgrass	20
				Redtop	5
22 Bluesprin	010xy004i South Slope Loamy 16-22" Ppt Artrx/agsp.	Favorable	1,500	Bluebunch wheatgrass	30
		Normal	1,100	Arrowleaf balsamroot	15
		Unfavorable	800	Sandberg bluegrass	5
				Tapertip hawksbeard	5
				Big sagebrush	5
				Antelope bitterbrush	5
26 Brownlee	010xy003i Loamy 16-20" Ppt Putr2/feid.	Favorable	2,000	Bluebunch wheatgrass	20
		Normal	1,400	Idaho fescue	20
		Unfavorable	800	Antelope bitterbrush	15
				Bluegrass	10
				Arrowleaf balsamroot	10
				Needlegrass	5
				Tapertip hawksbeard	5
				Big sagebrush	5

See footnote at end of table.

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Soil name and map symbol	Range site	Total production		Characteristic vegetation	Composition
		Kind of year	Dry weight		
			Lb/acre		Pct
29---------- Cabarton	043xy003i Wet Meadow----------	Favorable	4,000	Nebraska sedge----------	15
		Normal	3,500	Sedge----------	10
		Unfavorable	3,000	Rush----------	10
				Tufted hairgrass----------	10
				Redtop----------	5
				Kentucky bluegrass----------	5
				Cinquefoil----------	5
				Common camas----------	5
				Valerian----------	5
				Shrubby cinquefoil----------	5
				Willow----------	5
33*:					
Chilcott----------	011xy001i Loamy 10-12" Ppt Artrw/agsp.	Favorable	1,100	Bluebunch wheatgrass----------	25
		Normal	750	Wyoming big sagebrush----------	25
		Unfavorable	400	Thurber needlegrass----------	15
				Sandberg bluegrass----------	5
				Arrowleaf balsamroot----------	5
				Bottlebrush squirreltail------	5
Vickery----------	011xy001i Loamy 10-12" Ppt Artrw/agsp.	Favorable	1,100	Bluebunch wheatgrass----------	25
		Normal	750	Wyoming big sagebrush----------	25
		Unfavorable	400	Thurber needlegrass----------	10
				Sandberg bluegrass----------	5
				Basin wildrye----------	5
				Arrowleaf balsamroot----------	5
				Rabbitbrush----------	5
				Bottlebrush squirreltail------	5
36---------- Cranecreek	010xy007i Loamy 12-16" Ppt Artrx/agsp.	Favorable	1,900	Bluebunch wheatgrass----------	35
		Normal	1,300	Idaho fescue----------	10
		Unfavorable	800	Big sagebrush----------	10
				Nevada bluegrass----------	5
				Arrowleaf balsamroot----------	5
				Lupine----------	5
37*:					
Cranecreek--------	010xy007i Loamy 12-16" Ppt Artrx/agsp.	Favorable	1,900	Bluebunch wheatgrass----------	35
		Normal	1,300	Idaho fescue----------	10
		Unfavorable	800	Big sagebrush----------	10
				Nevada bluegrass----------	5
				Arrowleaf balsamroot----------	5
				Lupine----------	5
Reywat----------	010xy025i Shallow Stony Loam 12-16" Ppt Artrx/agsp.	Favorable	900	Bluebunch wheatgrass----------	40
		Normal	600	Big sagebrush----------	15
		Unfavorable	300	Sandberg bluegrass----------	5
				Tapertip hawksbeard----------	5
				Arrowleaf balsamroot----------	5
				Antelope bitterbrush----------	5
				Thurber needlegrass----------	5
42, 43---------- Demasters	010xy005i North Slope Loamy 16-22" Ppt Arva2/feid.	Favorable	2,800	Bluebunch wheatgrass----------	25
		Normal	2,300	Idaho fescue----------	15
		Unfavorable	1,500	Arrowleaf balsamroot----------	15
				Mountain big sagebrush--------	10
				Common snowberry----------	5
				Tapertip hawksbeard----------	5
				Lupine----------	5
				Antelope bitterbrush----------	5

See footnote at end of table.

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Soil name and map symbol	Range site	Total production		Characteristic vegetation	Composition
		Kind of year	Dry weight		
			Lb/acre		Pct
47---------- Deshler	010xy007i Loamy 12-16" Ppt Artrx/agsp.	Favorable	2,000	Bluebunch wheatgrass----------	25
		Normal	1,500	Idaho fescue----------	10
		Unfavorable	1,000	Arrowleaf balsamroot----------	10
				Big sagebrush----------	10
				Antelope bitterbrush----------	10
				Prairie junegrass----------	5
				Nevada bluegrass----------	5
				Bastard toadflax----------	5
				Eriogonum----------	5
48---------- Deshler	010xy019i South Slope Loamy 12-16" Ppt Artrx/agsp.	Favorable	1,400	Bluebunch wheatgrass----------	30
		Normal	900	Arrowleaf balsamroot----------	10
		Unfavorable	400	Big sagebrush----------	10
				Bottlebrush squirreltail------	10
				Sandberg bluegrass----------	10
				Nevada bluegrass----------	5
				Antelope bitterbrush----------	5
				Eriogonum----------	5
49---------- Deshler	010xy009i Stony Loam 12-16" Ppt Artrt/agsp.	Favorable	1,200	Bluebunch wheatgrass----------	45
		Normal	1,000	Basin big sagebrush----------	10
		Unfavorable	600	Idaho fescue----------	5
				Prairie junegrass----------	5
				Nevada bluegrass----------	5
				Arrowleaf balsamroot----------	5
				Antelope bitterbrush----------	5
				Eriogonum----------	5
50---------- Deshler	010xy011i South Slope Stony 12-16" Ppt Artrt/agsp.	Favorable	1,000	Bluebunch wheatgrass----------	35
		Normal	600	Basin big sagebrush----------	10
		Unfavorable	300	Sandberg bluegrass----------	10
				Nevada bluegrass----------	5
				Arrowleaf balsamroot----------	5
				Antelope bitterbrush----------	5
				Eriogonum----------	5
51*:					
Deshler----------	010xy007i Loamy 12-16" Ppt Artrx/agsp.	Favorable	2,000	Bluebunch wheatgrass----------	25
		Normal	1,500	Idaho fescue----------	10
		Unfavorable	1,000	Arrowleaf balsamroot----------	10
				Big sagebrush----------	10
				Antelope bitterbrush----------	10
				Prairie junegrass----------	5
				Nevada bluegrass----------	5
				Bastard toadflax----------	5
				Eriogonum----------	5
Agerdelly---------	010xy006i Churning Clay 11-16" Ppt Artrx/agsp.	Favorable	700	Bluebunch wheatgrass----------	25
		Normal	500	Big sagebrush----------	20
		Unfavorable	400	Sandberg bluegrass----------	10
				Tapertip hawksbeard----------	10
				Tall gray rabbitbrush---------	10
				Nevada bluegrass----------	5

See footnote at end of table.

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Soil name and map symbol	Range site	Total production		Characteristic vegetation	Composition
		Kind of year	Dry weight		
			Lb/acre		Pct
52*:					
Deshler	010xy019i South Slope Loamy 12-16" Ppt Artrx/agsp.	Favorable	1,400	Bluebunch wheatgrass	30
		Normal	900	Arrowleaf balsamroot	10
		Unfavorable	400	Big sagebrush	10
				Bottlebrush squirreltail	10
				Sandberg bluegrass	10
				Nevada bluegrass	5
				Antelope bitterbrush	5
				Eriogonum	5
Agerdelly	010xy006i Churning Clay 11-16" Ppt Artrx/agsp.	Favorable	700	Bluebunch wheatgrass	25
		Normal	500	Big sagebrush	20
		Unfavorable	400	Sandberg bluegrass	10
				Tapertip hawksbeard	10
				Tall gray rabbitbrush	10
				Nevada bluegrass	5
53*:					
Deshler	010xy009i Stony Loam 12-16" Ppt Artrt/agsp.	Favorable	1,200	Bluebunch wheatgrass	45
		Normal	1,000	Basin big sagebrush	10
		Unfavorable	600	Idaho fescue	5
				Prairie junegrass	5
				Nevada bluegrass	5
				Arrowleaf balsamroot	5
				Antelope bitterbrush	5
				Eriogonum	5
Agerdelly	010xy006i Churning Clay 11-16" Ppt Artrx/agsp.	Favorable	700	Bluebunch wheatgrass	25
		Normal	500	Big sagebrush	20
		Unfavorable	400	Sandberg bluegrass	10
				Tapertip hawksbeard	10
				Tall gray rabbitbrush	10
				Nevada bluegrass	5
54*:					
Deshler	010xy011i South Slope Stony 12-16" Ppt Artrt/agsp.	Favorable	1,000	Bluebunch wheatgrass	35
		Normal	600	Basin big sagebrush	10
		Unfavorable	300	Sandberg bluegrass	10
				Nevada bluegrass	5
				Arrowleaf balsamroot	5
				Antelope bitterbrush	5
				Eriogonum	5
Agerdelly	010xy006i Churning Clay 11-16" Ppt Artrx/agsp.	Favorable	700	Bluebunch wheatgrass	25
		Normal	500	Big sagebrush	20
		Unfavorable	400	Sandberg bluegrass	10
				Tapertip hawksbeard	10
				Tall gray rabbitbrush	10
				Nevada bluegrass	5
57*:					
Deshler	010xy007i Loamy 12-16" Ppt Artrx/agsp.	Favorable	2,000	Bluebunch wheatgrass	25
		Normal	1,500	Idaho fescue	10
		Unfavorable	1,000	Arrowleaf balsamroot	10
				Big sagebrush	10
				Antelope bitterbrush	10
				Prairie junegrass	5
				Nevada bluegrass	5
				Bastard toadflax	5
				Eriogonum	5

See footnote at end of table.

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Soil name and map symbol	Range site	Total production		Characteristic vegetation	Composition
		Kind of year	Dry weight		
			Lb/acre		Pct
57*:					
Brownlee	010xy003i Loamy 16-20" Ppt Putr2/feid.	Favorable	2,000	Bluebunch wheatgrass	20
		Normal	1,400	Idaho fescue	20
		Unfavorable	800	Antelope bitterbrush	15
				Bluegrass	10
				Arrowleaf balsamroot	10
				Needlegrass	5
				Tapertip hawksbeard	5
				Big sagebrush	5
58*:					
Deshler	010xy007i Loamy 12-16" Ppt Artrx/agsp.	Favorable	2,000	Bluebunch wheatgrass	25
		Normal	1,500	Idaho fescue	10
		Unfavorable	1,000	Arrowleaf balsamroot	10
				Big sagebrush	10
				Antelope bitterbrush	10
				Prairie junegrass	5
				Nevada bluegrass	5
				Bastard toadflax	5
				Eriogonum	5
Devnot	010xy002i Very Shallow 12-20" Ppt Arri2/posa12.	Favorable	200	Stiff sagebrush	35
		Normal	125	Sandberg bluegrass	25
		Unfavorable	75	Slenderbush eriogonum	10
				Bottlebrush squirreltail	5
				Phlox	5
				Biscuitroot	5
59*:					
Deshler	010xy019i South Slope Loamy 12-16" Ppt Artrx/agsp.	Favorable	1,400	Bluebunch wheatgrass	30
		Normal	900	Arrowleaf balsamroot	10
		Unfavorable	400	Big sagebrush	10
				Bottlebrush squirreltail	10
				Sandberg bluegrass	10
				Nevada bluegrass	5
				Antelope bitterbrush	5
				Eriogonum	5
Devnot	010xy002i Very Shallow 12-20" Ppt Arri2/posa12.	Favorable	200	Stiff sagebrush	35
		Normal	125	Sandberg bluegrass	25
		Unfavorable	75	Slenderbush eriogonum	10
				Bottlebrush squirreltail	5
				Phlox	5
				Biscuitroot	5
60 Deterson	010xy010i North Slope Loamy 12-16" Ppt Artrx/agsp.	Favorable	2,200	Bluebunch wheatgrass	30
		Normal	1,600	Idaho fescue	20
		Unfavorable	1,000	Big sagebrush	15
				Arrowleaf balsamroot	5
				Antelope bitterbrush	5
61 Deterson	010xy007i Loamy 12-16" Ppt Artrx/agsp.	Favorable	1,900	Bluebunch wheatgrass	35
		Normal	1,300	Big sagebrush	15
		Unfavorable	800	Idaho fescue	10
				Arrowleaf balsamroot	5

See footnote at end of table.

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Soil name and map symbol	Range site	Total production		Characteristic vegetation	Composition
		Kind of year	Dry weight		
			Lb/acre		Pct
62*:					
Dishmer	010xy002i Very Shallow 12-20" Ppt Arri2/posa12.	Favorable	200	Sandberg bluegrass	35
		Normal	125	Stiff sagebrush	35
		Unfavorable	75	Bluebunch wheatgrass	5
				Biscuitroot	5
				Eriogonum	5
				Hooker balsamroot	5
Haw	010xy007i Loamy 12-16" Ppt Artrx/agsp.	Favorable	1,900	Bluebunch wheatgrass	35
		Normal	1,200	Thurber needlegrass	15
		Unfavorable	800	Big sagebrush	15
				Sandberg bluegrass	5
				Arrowleaf balsamroot	5
				Tapertip hawksbeard	5
68	010xy007i Loamy 12-16" Ppt Artrx/agsp.	Favorable	1,900	Bluebunch wheatgrass	35
Gem		Normal	1,200	Big sagebrush	10
		Unfavorable	800	Idaho fescue	5
				Sandberg bluegrass	5
				Arrowleaf balsamroot	5
				Lupine	5
				Antelope bitterbrush	5
				Thurber needlegrass	5
69	010xy019i South Slope Loamy 12-16" Ppt Artrx/agsp.	Favorable	1,400	Bluebunch wheatgrass	35
Gem		Normal	900	Arrowleaf balsamroot	10
		Unfavorable	400	Big sagebrush	10
				Sandberg bluegrass	5
				Antelope bitterbrush	5
				Bottlebrush squirreltail	5
70	010xy009i Stony Loam 12-16" Ppt Artrt/agsp.	Favorable	1,250	Bluebunch wheatgrass	45
Gem		Normal	1,050	Basin big sagebrush	10
		Unfavorable	650	Idaho fescue	5
				Sandberg bluegrass	5
				Arrowleaf balsamroot	5
				Lupine	5
				Antelope bitterbrush	5
71*:					
Gem	010xy007i Loamy 12-16" Ppt Artrx/agsp.	Favorable	1,900	Bluebunch wheatgrass	35
		Normal	1,200	Big sagebrush	10
		Unfavorable	800	Idaho fescue	5
				Sandberg bluegrass	5
				Arrowleaf balsamroot	5
				Lupine	5
				Antelope bitterbrush	5
				Thurber needlegrass	5
Bakeoven	010xy002i Very Shallow 12-20" Ppt Arri2/posa12.	Favorable	200	Sandberg bluegrass	35
		Normal	125	Stiff sagebrush	35
		Unfavorable	75	Eriogonum	10
				Bluebunch wheatgrass	5
				Phlox	5

See footnote at end of table.

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Soil name and map symbol	Range site	Total production		Characteristic vegetation	Composition
		Kind of year	Dry weight		
			Lb/acre		Pct
72*:					
Gem	010xy019i South Slope Loamy 12-16" Ppt Artrx/agsp.	Favorable	1,400	Bluebunch wheatgrass	35
		Normal	900	Arrowleaf balsamroot	10
		Unfavorable	400	Big sagebrush	10
				Sandberg bluegrass	5
				Antelope bitterbrush	5
				Bottlebrush squirreltail	5
Bakeoven	010xy002i Very Shallow 12-20" Ppt Arri2/posa12.	Favorable	200	Sandberg bluegrass	35
		Normal	125	Stiff sagebrush	35
		Unfavorable	75	Eriogonum	10
				Bluebunch wheatgrass	5
				Phlox	5
73*:					
Gem	010xy007i Loamy 12-16" Ppt Artrx/agsp.	Favorable	1,900	Bluebunch wheatgrass	35
		Normal	1,200	Big sagebrush	10
		Unfavorable	800	Idaho fescue	5
				Sandberg bluegrass	5
				Arrowleaf balsamroot	5
				Lupine	5
				Antelope bitterbrush	5
				Thurber needlegrass	5
Reywat	010xy025i Shallow Stony Loam 12-16" Ppt Artrx/agsp.	Favorable	900	Bluebunch wheatgrass	40
		Normal	600	Big sagebrush	15
		Unfavorable	300	Sandberg bluegrass	5
				Tapertip hawksbeard	5
				Arrowleaf balsamroot	5
				Antelope bitterbrush	5
				Thurber needlegrass	5
74*:					
Gem	010xy019i South Slope Loamy 12-16" Ppt Artrx/agsp.	Favorable	1,400	Bluebunch wheatgrass	35
		Normal	900	Arrowleaf balsamroot	10
		Unfavorable	400	Big sagebrush	10
				Sandberg bluegrass	5
				Antelope bitterbrush	5
				Bottlebrush squirreltail	5
Reywat	010xy016i Shallow South Stony 12-16" Ppt Artrx/ags.	Favorable	650	Bluebunch wheatgrass	30
		Normal	400	Big sagebrush	15
		Unfavorable	300	Sandberg bluegrass	10
				Tapertip hawksbeard	5
				Arrowleaf balsamroot	5
				Bottlebrush squirreltail	5
				Antelope bitterbrush	5
78 Glasgow	011xy001i Loamy 10-12" Ppt Artrw/agsp.	Favorable	1,100	Bluebunch wheatgrass	25
		Normal	750	Wyoming big sagebrush	25
		Unfavorable	400	Thurber needlegrass	10
				Sandberg bluegrass	5
				Antelope bitterbrush	5
				Arrowleaf balsamroot	5
79 Glasgow	011xy008i South Slope Loamy 10-12" Ppt Artrw/agsp.	Favorable	600	Bluebunch wheatgrass	30
		Normal	400	Thurber needlegrass	15
		Unfavorable	250	Wyoming big sagebrush	10
				Antelope bitterbrush	10
				Sandberg bluegrass	5
				Arrowleaf balsamroot	5

See footnote at end of table.

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Soil name and map symbol	Range site	Total production		Characteristic vegetation	Composition
		Kind of year	Dry weight		
			Lb/acre		Pct
80*:					
Glasgow	011xy001i Loamy 10-12" Ppt Artrw/agsp.	Favorable	1,100	Bluebunch wheatgrass	25
		Normal	750	Wyoming big sagebrush	25
		Unfavorable	400	Thurber needlegrass	10
				Sandberg bluegrass	5
				Antelope bitterbrush	5
				Arrowleaf balsamroot	5
Lankbush	011xy001i Loamy 10-12" Ppt Artrw/agsp.	Favorable	1,100	Bluebunch wheatgrass	25
		Normal	750	Wyoming big sagebrush	25
		Unfavorable	400	Thurber needlegrass	15
				Sandberg bluegrass	5
				Bottlebrush squirreltail	5
				Arrowleaf balsamroot	5
81*:					
Glasgow	011xy008i South Slope Loamy 10-12" Ppt Artrw/agsp.	Favorable	600	Bluebunch wheatgrass	30
		Normal	400	Thurber needlegrass	15
		Unfavorable	250	Wyoming big sagebrush	10
				Antelope bitterbrush	10
				Sandberg bluegrass	5
				Arrowleaf balsamroot	5
Lankbush	011xy008i South Slope Loamy 10-12" Ppt Artrw/agsp.	Favorable	600	Bluebunch wheatgrass	30
		Normal	400	Thurber needlegrass	15
		Unfavorable	250	Wyoming big sagebrush	10
				Indian ricegrass	10
				Bottlebrush squirreltail	5
				Arrowleaf balsamroot	5
				Tapertip hawksbeard	5
86	010xy010i North Slope Loamy 12-16" Ppt Artrx/agsp.	Favorable	2,200	Bluebunch wheatgrass	30
Gross		Normal	1,600	Idaho fescue	20
		Unfavorable	1,000	Big sagebrush	15
				Needlegrass	5
				Sandberg bluegrass	5
				Arrowleaf balsamroot	5
				Lupine	5
				Antelope bitterbrush	5
87	010xy001i North Slope Loamy 12-16" Ppt Feid/agsp.	Favorable	2,400	Idaho fescue	35
Gross		Normal	1,800	Bluebunch wheatgrass	25
		Unfavorable	1,300	Sandberg bluegrass	10
				Arrowleaf balsamroot	5
				Common yarrow	5
88*:					
Gross	010xy001i North Slope Loamy 12-16" Ppt Feid/agsp.	Favorable	2,400	Idaho fescue	35
		Normal	1,800	Bluebunch wheatgrass	25
		Unfavorable	1,300	Sandberg bluegrass	10
				Arrowleaf balsamroot	5
				Common yarrow	5
Baksoven	010xy002i Very Shallow 12-20" Ppt Arri2/posa12.	Favorable	200	Sandberg bluegrass	35
		Normal	125	Stiff sagebrush	35
		Unfavorable	75	Eriogonum	10
				Bluebunch wheatgrass	5
				Phlox	5

See footnote at end of table.

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Soil name and map symbol	Range site	Total production		Characteristic vegetation	Composition
		Kind of year	Dry weight		
			Lb/acre		Pct
89*:					
Gross	010xy010i North Slope Loamy 12-16" Ppt Artrx/agsp.	Favorable	2,200	Bluebunch wheatgrass	30
		Normal	1,600	Idaho fescue	20
		Unfavorable	1,000	Big sagebrush	15
				Needlegrass	5
				Sandberg bluegrass	5
				Arrowleaf balsamroot	5
				Lupine	5
				Antelope bitterbrush	5
Baketoven	010xy002i Very Shallow 12-20" Ppt Arri2/posa12.	Favorable	200	Sandberg bluegrass	35
		Normal	125	Stiff sagebrush	35
		Unfavorable	75	Eriogonum	10
				Bluebunch wheatgrass	5
				Phlox	5
90*:					
Gwin	010xy018i Shallow South Stony 14-18" Ppt Agsp/posa.	Favorable	800	Bluebunch wheatgrass	60
		Normal	600	Sandberg bluegrass	8
		Unfavorable	400	Balsamroot	5
				Lupine	5
				Biscuitroot	5
				Longleaf phlox	5
Rock outcrop.					
93, 94, 95, 96----- Haw	010xy007i Loamy 12-16" Ppt Artrx/agsp.	Favorable	1,900	Bluebunch wheatgrass	35
		Normal	1,200	Thurber needlegrass	15
		Unfavorable	800	Big sagebrush	15
				Sandberg bluegrass	5
				Arrowleaf balsamroot	5
				Tapertip hawksbeard	5
97, 98, 99, 100---- Jacknife	010xy003i Loamy 16-20" Ppt Putr2/feid.	Favorable	2,000	Bluebunch wheatgrass	20
		Normal	1,400	Idaho fescue	20
		Unfavorable	800	Antelope bitterbrush	15
				Arrowleaf balsamroot	10
				Prairie junegrass	5
				Bluegrass	5
				Tapertip hawksbeard	5
				Penstemon	5
				Biscuitroot	5
101---------- Jacknife	010xy021i Stony Loam 16-22" Ppt Artrt/agsp.	Favorable	2,100	Bluebunch wheatgrass	35
		Normal	1,400	Idaho fescue	10
		Unfavorable	800	Basin big sagebrush	10
				Needlegrass	5
				Prairie junegrass	5
				Bulbous oniongrass	5
				Big bluegrass	5
				Mountain brome	5
				Tapertip hawksbeard	5
				Antelope bitterbrush	5
111---------- Langrell	011xy015i Loamy Bottom 8-14" Ppt Artrt/elc12.	Favorable	1,600	Basin wildrye	45
		Normal	1,200	Basin big sagebrush	15
		Unfavorable	800	Nevada bluegrass	5
				Lupine	5

See footnote at end of table.

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Soil name and map symbol	Range site	Total production		Characteristic vegetation	Composition
		Kind of year	Dry weight		
			Lb/acre		Pct
115---------- Lankbush	011xy001i Loamy 10-12" Ppt Artrw/agsp.	Favorable	1,100	Bluebunch wheatgrass----------	25
		Normal	750	Wyoming big sagebrush---------	25
		Unfavorable	400	Thurber needlegrass----------	15
				Sandberg bluegrass----------	5
				Bottlebrush squirreltail------	5
				Arrowleaf balsamroot----------	5
116, 117---------- Lanktree	011xy001i Loamy 10-12" Ppt Artrw/agsp.	Favorable	1,100	Bluebunch wheatgrass----------	25
		Normal	750	Wyoming big sagebrush---------	25
		Unfavorable	400	Thurber needlegrass----------	15
				Sandberg bluegrass----------	5
				Bottlebrush squirreltail------	5
				Arrowleaf balsamroot----------	5
118, 119---------- Lanktree	011xy001i Loamy 10-12" Ppt Artrw/agsp.	Favorable	1,100	Bluebunch wheatgrass----------	25
		Normal	750	Wyoming big sagebrush---------	25
		Unfavorable	400	Thurber needlegrass----------	10
				Sandberg bluegrass----------	5
				Arrowleaf balsamroot----------	5
120*:					
Lanktree----------	011xy008i South Slope Loamy 10-12" Ppt Artrw/agsp.	Favorable	600	Bluebunch wheatgrass----------	30
		Normal	400	Thurber needlegrass----------	15
		Unfavorable	250	Wyoming big sagebrush---------	10
				Indian ricegrass--------------	10
				Bottlebrush squirreltail------	5
				Arrowleaf balsamroot----------	5
				Tapertip hawksbeard-----------	5
				Antelope bitterbrush----------	5
Lankbush----------	011xy008i South Slope Loamy 10-12" Ppt Artrw/agsp.	Favorable	600	Bluebunch wheatgrass----------	30
		Normal	400	Thurber needlegrass----------	15
		Unfavorable	250	Wyoming big sagebrush---------	10
				Indian ricegrass--------------	10
				Bottlebrush squirreltail------	5
				Arrowleaf balsamroot----------	5
				Tapertip hawksbeard-----------	5
125---------- Lolalita	011xy001i Loamy 10-12" Ppt Artrw/agsp.	Favorable	1,100	Bluebunch wheatgrass----------	25
		Normal	750	Wyoming big sagebrush---------	25
		Unfavorable	400	Thurber needlegrass----------	10
				Sandberg bluegrass----------	5
				Arrowleaf balsamroot----------	5
126*:					
Lolalita----------	011xy008i South Slope Loamy 10-12" Ppt Artrw/agsp.	Favorable	700	Bluebunch wheatgrass----------	25
		Normal	400	Indian ricegrass--------------	20
		Unfavorable	250	Wyoming big sagebrush---------	15
				Thurber needlegrass----------	10
				Sandberg bluegrass----------	10
				Lanceleaf yellowbrush---------	5
Glasgow----------	011xy008i South Slope Loamy 10-12" Ppt Artrw/agsp.	Favorable	600	Bluebunch wheatgrass----------	30
		Normal	400	Thurber needlegrass----------	15
		Unfavorable	250	Wyoming big sagebrush---------	10
				Antelope bitterbrush----------	10
				Sandberg bluegrass----------	5
				Arrowleaf balsamroot----------	5

See footnote at end of table.

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Soil name and map symbol	Range site	Total production		Characteristic vegetation	Composition
		Kind of year	Dry weight		
			Lb/acre		Pct
127*:					
Lolalita	011xy008i South Slope Loamy 10-12" Ppt Artrw/agsp.	Favorable	700	Bluebunch wheatgrass	25
		Normal	400	Indian ricegrass	20
		Unfavorable	250	Wyoming big sagebrush	15
				Thurber needlegrass	10
				Sandberg bluegrass	10
				Lanceleaf yellowbrush	5
Saralegui	011xy008i South Slope Loamy 10-12" Ppt Artrw/agsp.	Favorable	600	Bluebunch wheatgrass	30
		Normal	400	Thurber needlegrass	15
		Unfavorable	250	Wyoming big sagebrush	10
				Indian ricegrass	5
				Sandberg bluegrass	5
				Arrowleaf balsamroot	5
				Antelope bitterbrush	5
128*, 129*:					
Lorella	010xy016i Shallow South Stony 12-16" Ppt Artrx/ags.	Favorable	650	Bluebunch wheatgrass	35
		Normal	400	Big sagebrush	20
		Unfavorable	300	Sandberg bluegrass	10
				Needlegrass	5
				Tapertip hawksbeard	5
				Arrowleaf balsamroot	5
				Eriogonum	5
				Antelope bitterbrush	5
Rock outcrop.					
130 McDaniel	009xy002i North Slope Loamy 16-22" Ppt Syal/feid.	Favorable	3,000	Idaho fescue	40
		Normal	2,400	Bluebunch wheatgrass	25
		Unfavorable	1,500	Common snowberry	10
				Arrowleaf balsamroot	5
131*:					
McDaniel	009xy013i South Slope Loamy 16-22" Ppt Agsp/feid.	Favorable	2,200	Bluebunch wheatgrass	35
		Normal	1,450	Idaho fescue	15
		Unfavorable	1,100	Sandberg bluegrass	5
				Lupine	5
				Arrowleaf balsamroot	5
Rockly	009xy017i Very Shallow 12-22" Ppt Agsp/posa12.	Favorable	600	Bluebunch wheatgrass	50
		Normal	400	Sandberg bluegrass	20
		Unfavorable	250	Idaho fescue	5
				Eriogonum	5
132*:					
McDaniel	009xy013i South Slope Loamy 16-22" Ppt Agsp/feid.	Favorable	2,200	Bluebunch wheatgrass	35
		Normal	1,450	Idaho fescue	15
		Unfavorable	1,100	Sandberg bluegrass	5
				Lupine	5
				Arrowleaf balsamroot	5
Starveout	009xy003i Loamy 16-22" Ppt Feid/agsp.	Favorable	2,400	Idaho fescue	40
		Normal	1,750	Bluebunch wheatgrass	30
		Unfavorable	1,300	Sandberg bluegrass	5
				Big bluegrass	5
				Lupine	5
				Arrowleaf balsamroot	5
				Prairie junegrass	5

See footnote at end of table.

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Soil name and map symbol	Range site	Total production		Characteristic vegetation	Composition
		Kind of year	Dry weight		
			Lb/acre		Pct
135---------- Meland	010xy003i Loamy 16-20" Ppt Putr2/feid.	Favorable	2,000	Bluebunch wheatgrass----------	20
		Normal	1,400	Idaho fescue----------	20
		Unfavorable	800	Bluegrass----------	10
				Arrowleaf balsamroot----------	10
				Antelope bitterbrush----------	10
				Big sagebrush----------	5
136---------- Meland	010xy003i Loamy 16-20" Ppt Putr2/feid.	Favorable	2,000	Bluebunch wheatgrass----------	20
		Normal	1,400	Idaho fescue----------	20
		Unfavorable	800	Bluegrass----------	20
				Arrowleaf balsamroot----------	10
				Antelope bitterbrush----------	10
				Big sagebrush----------	5
137*:					
Meland----------	010xy003i Loamy 16-20" Ppt Putr2/feid.	Favorable	2,000	Bluebunch wheatgrass----------	20
		Normal	1,400	Idaho fescue----------	20
		Unfavorable	800	Bluegrass----------	20
				Arrowleaf balsamroot----------	10
				Antelope bitterbrush----------	10
				Big sagebrush----------	5
Riggins----------	010xy026i Shallow Stony Loam 16-22" Ppt Artrx/feid.	Favorable	1,100	Bluebunch wheatgrass----------	20
		Normal	800	Idaho fescue----------	15
		Unfavorable	500	Big sagebrush----------	15
				Nevada bluegrass----------	5
				Arrowleaf balsamroot----------	5
				Tapertip hawksbeard----------	5
				Antelope bitterbrush----------	5
				Sandberg bluegrass----------	5
138*:					
Meland----------	010xy004i South Slope Loamy 16-22" Ppt Artrx/agsp.	Favorable	1,500	Bluebunch wheatgrass----------	30
		Normal	1,100	Arrowleaf balsamroot----------	15
		Unfavorable	800	Bluegrass----------	5
				Antelope bitterbrush----------	5
				Big sagebrush----------	5
				Tapertip hawksbeard----------	5
Riggins----------	010xy016i Shallow South Stony 12-16" Ppt Artrx/ags.	Favorable	650	Bluebunch wheatgrass----------	30
		Normal	400	Big sagebrush----------	15
		Unfavorable	300	Sandberg bluegrass----------	10
				Nevada bluegrass----------	5
				Arrowleaf balsamroot----------	5
				Tapertip hawksbeard----------	5
				Antelope bitterbrush----------	5
139---------- Melton	043xy003i Wet Meadow----------	Favorable	4,500	Nebraska sedge----------	15
		Normal	4,000	Sedge----------	15
		Unfavorable	3,000	Rush----------	10
				Tufted hairgrass----------	10
				Redtop----------	5
				Kentucky bluegrass----------	5
				Cinquefoil----------	5
				Common camas----------	5
				Valerian----------	5
				Scouler willow----------	5

See footnote at end of table.

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Soil name and map symbol	Range site	Total production		Characteristic vegetation	Composition
		Kind of year	Dry weight		
			Lb/acre		Pct
140*:					
Melton	043xy003i Wet Meadow	Favorable	4,500	Nebraska sedge	15
		Normal	4,000	Sedge	15
		Unfavorable	3,000	Rush	10
				Tufted hairgrass	10
				Redtop	5
				Kentucky bluegrass	5
				Cinquefoil	5
				Common camas	5
				Valerian	5
				Scouler willow	5
Roseberry	043xy003i Wet Meadow	Favorable	4,500	Nebraska sedge	15
		Normal	4,000	Sedge	15
		Unfavorable	3,000	Rush	10
				Tufted hairgrass	10
				Redtop	5
				Kentucky bluegrass	5
				Cinquefoil	5
				Common camas	5
				Valerian	5
				Scouler willow	5
145 Midvale	010xy003i Loamy 16-20" Ppt Putr2/feid.	Favorable	2,000	Bluebunch wheatgrass	25
		Normal	1,400	Idaho fescue	10
		Unfavorable	800	Nevada bluegrass	10
				Arrowleaf balsamroot	10
				Antelope bitterbrush	10
				Tapertip hawksbeard	5
				Penstemon	5
				Big sagebrush	5
149 Moonstone	010ay004i Loamy 12-16" Ppt Artrv/feid.	Favorable	1,100	Bluebunch wheatgrass	20
		Normal	750	Idaho fescue	20
		Unfavorable	600	Mountain big sagebrush	15
				Lupine	10
				Arrowleaf balsamroot	5
153*:					
Mulett	011xy012i Shallow Stony Loam 8-10" Ppt Ararn/stth2.	Favorable	600	Low sagebrush	60
		Normal	450	Thurber needlegrass	15
		Unfavorable	300	Sandberg bluegrass	10
				Arrowleaf balsamroot	5
				Bottlebrush squirreltail	5
Mackay	011xy008i South Slope Loamy 10-12" Ppt Artrw/agsp.	Favorable	900	Bluebunch wheatgrass	25
		Normal	500	Bottlebrush squirreltail	10
		Unfavorable	300	Thurber needlegrass	10
				Wyoming big sagebrush	10
				Antelope bitterbrush	10
				Sandberg bluegrass	5
				Indian ricegrass	5
				Arrowleaf balsamroot	5
				Tapertip hawksbeard	5

See footnote at end of table.

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Soil name and map symbol	Range site	Total production		Characteristic vegetation	Composition
		Kind of year	Dry weight		
			Lb/acre		Pct
158---------- Newell	010xy007i Loamy 12-16" Ppt Artrx/agsp.	Favorable	1,800	Bluebunch wheatgrass----------	35
		Normal	1,200	Idaho fescue----------	25
		Unfavorable	700	Big sagebrush----------	10
				Needlegrass----------	5
				Nevada bluegrass----------	5
				Arrowleaf balsamroot----------	5
				Lupine----------	5
161*:					
Odermott----------	010xy003i Loamy 16-20" Ppt Putr2/feid.	Favorable	2,900	Bluebunch wheatgrass----------	20
		Normal	2,000	Idaho fescue----------	20
		Unfavorable	1,400	Antelope bitterbrush----------	15
				Arrowleaf balsamroot----------	10
				Prairie junegrass----------	5
				Bluegrass----------	5
				Tapertip hawksbeard----------	5
				Big sagebrush----------	5
Appledellia-------	043xy003i Loamy 22+" Ppt Agsp/feid.	Favorable	2,500	Bluebunch wheatgrass----------	20
		Normal	2,000	Idaho fescue----------	20
		Unfavorable	1,500	Slender wheatgrass----------	20
				Arrowleaf balsamroot----------	5
				Eriogonum----------	5
				Lupine----------	5
				Mountain big sagebrush--------	5
162---------- Oldsferry	010xy019i South Slope Loamy 12-16" Ppt Artrx/agsp.	Favorable	1,400	Bluebunch wheatgrass----------	30
		Normal	1,000	Big sagebrush----------	15
		Unfavorable	600	Idaho fescue----------	10
				Sandberg bluegrass----------	5
				Bottlebrush squirreltail------	5
				Arrowleaf balsamroot----------	5
				Lupine----------	5
				Tapertip hawksbeard----------	5
				Antelope bitterbrush----------	5
168---------- Owyhee	011xy001i Loamy 10-12" Ppt Artrw/agsp.	Favorable	1,000	Bluebunch wheatgrass----------	25
		Normal	700	Wyoming big sagebrush---------	25
		Unfavorable	500	Thurber needlegrass----------	10
				Sandberg bluegrass----------	5
				Bottlebrush squirreltail------	5
				Arrowleaf balsamroot----------	5
				Rabbitbrush----------	5
170---------- Payette	010xy008i Granitic 12-16" Ppt Artrx/agsp.	Favorable	1,000	Bluebunch wheatgrass----------	40
		Normal	700	Big sagebrush----------	15
		Unfavorable	400	Thurber needlegrass----------	10
				Sandberg bluegrass----------	10
				Arrowleaf balsamroot----------	5
				Antelope bitterbrush----------	5
171---------- Payette	011xy018i South Slope Granitic 8-12" Ppt Artrt/ags.	Favorable	500	Bluebunch wheatgrass----------	20
		Normal	300	Basin big sagebrush----------	15
		Unfavorable	150	Sandberg bluegrass----------	5
				Arrowleaf balsamroot----------	5
				Antelope bitterbrush----------	5

See footnote at end of table.

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Soil name and map symbol	Range site	Total production		Characteristic vegetation	Composition
		Kind of year	Dry weight		
			Lb/acre		Pct
172*:					
Payette	011xy018i South Slope Granitic 8-12" Ppt Artrt/ags.	Favorable	500	Bluebunch wheatgrass	20
		Normal	300	Basin big sagebrush	15
		Unfavorable	150	Sandberg bluegrass	5
				Arrowleaf balsamroot	5
				Antelope bitterbrush	5
Van Dusen	010xy010i North Slope Loamy 12-16" Ppt Artrx/agsp.	Favorable	2,200	Bluebunch wheatgrass	30
		Normal	1,600	Idaho fescue	20
		Unfavorable	1,000	Big sagebrush	15
				Sandberg bluegrass	5
				Arrowleaf balsamroot	5
				Tapertip hawksbeard	5
				Antelope bitterbrush	5
176 Riggins	010xy026i Shallow Stony Loam 16-22" Ppt Artrx/feid.	Favorable	1,100	Bluebunch wheatgrass	20
		Normal	800	Idaho fescue	15
		Unfavorable	500	Big sagebrush	15
				Nevada bluegrass	5
				Arrowleaf balsamroot	5
				Tapertip hawksbeard	5
				Antelope bitterbrush	5
				Sandberg bluegrass	5
177, 178 Riggins	010xy016i Shallow South Stony 12-16" Ppt Artrx/ags.	Favorable	650	Bluebunch wheatgrass	30
		Normal	400	Big sagebrush	15
		Unfavorable	300	Sandberg bluegrass	10
				Nevada bluegrass	5
				Arrowleaf balsamroot	5
				Tapertip hawksbeard	5
				Antelope bitterbrush	5
180*:					
Rock outcrop.					
Bakeoven	010xy002i Very Shallow 12-20" Ppt Arri2/posa12.	Favorable	200	Sandberg bluegrass	35
		Normal	125	Stiff sagebrush	35
		Unfavorable	75	Eriogonum	10
				Bluebunch wheatgrass	5
				Phlox	5
181 Rockly	009xy017i Very Shallow 12-22" Ppt Agsp/posa12.	Favorable	600	Bluebunch wheatgrass	50
		Normal	400	Sandberg bluegrass	20
		Unfavorable	250	Idaho fescue	5
				Eriogonum	5
182*:					
Rockly	010xy002i Very Shallow 12-20" Ppt Arri2/posa12.	Favorable	200	Sandberg bluegrass	40
		Normal	125	Stiff sagebrush	35
		Unfavorable	75	Eriogonum	10
				Bluebunch wheatgrass	5
				Serrate balsamroot	5
Riggins	010xy026i Shallow Stony Loam 16-22" Ppt Artrx/feid.	Favorable	1,100	Bluebunch wheatgrass	20
		Normal	800	Idaho fescue	15
		Unfavorable	500	Big sagebrush	15
				Nevada bluegrass	5
				Arrowleaf balsamroot	5
				Tapertip hawksbeard	5
				Antelope bitterbrush	5
				Sandberg bluegrass	5

See footnote at end of table.

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Soil name and map symbol	Range site	Total production		Characteristic vegetation	Composition
		Kind of year	Dry weight		
			Lb/acre		Pct
183*:					
Rockly	009xy017i Very Shallow 12-22" Ppt Agsp/posa12.	Favorable	550	Sandberg bluegrass	45
		Normal	350	Stiff sagebrush	15
		Unfavorable	250	Bluebunch wheatgrass	10
				Idaho fescue	5
				Eriogonum	5
Riggins	010xy016i Shallow South Stony 12-16" Ppt Artrx/ags.	Favorable	650	Bluebunch wheatgrass	30
		Normal	400	Big sagebrush	15
		Unfavorable	300	Sandberg bluegrass	10
				Nevada bluegrass	5
				Arrowleaf balsamroot	5
				Tapertip hawksbeard	5
				Antelope bitterbrush	5
184*:					
Rockly	009xy017i Very Shallow 12-22" Ppt Agsp/posa12.	Favorable	600	Bluebunch wheatgrass	50
		Normal	400	Sandberg bluegrass	20
		Unfavorable	250	Idaho fescue	5
				Eriogonum	5
Rock outcrop.					
185*:					
Rockly	009xy017i Very Shallow 12-22" Ppt Agsp/posa12.	Favorable	600	Bluebunch wheatgrass	50
		Normal	400	Sandberg bluegrass	20
		Unfavorable	250	Idaho fescue	5
				Eriogonum	5
Starveout	009xy003i Loamy 16-22" Ppt Feid/agsp.	Favorable	2,400	Idaho fescue	40
		Normal	1,750	Bluebunch wheatgrass	30
		Unfavorable	1,300	Sandberg bluegrass	5
				Big bluegrass	5
				Lupine	5
				Arrowleaf balsamroot	5
				Prairie junegrass	5
McDaniel	009xy013i South Slope Loamy 16-22" Ppt Agsp/feid.	Favorable	2,200	Bluebunch wheatgrass	35
		Normal	1,450	Idaho fescue	15
		Unfavorable	1,100	Sandberg bluegrass	5
				Lupine	5
				Arrowleaf balsamroot	5
186 Roseberry	043xy003i Wet Meadow	Favorable	4,500	Nebraska sedge	15
		Normal	4,000	Sedge	15
		Unfavorable	3,000	Rush	10
				Tufted hairgrass	10
				Redtop	5
				Kentucky bluegrass	5
				Cinquefoil	5
				Common camas	5
				Valerian	5
				Scouler willow	5

See footnote at end of table.

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Soil name and map symbol	Range site	Total production		Characteristic vegetation	Composition
		Kind of year	Dry weight		
			Lb/acre		Pct
191*:					
Starveout	009xy003i Loamy 16-22" Ppt Feid/agsp.	Favorable	2,400	Idaho fescue	40
		Normal	1,750	Bluebunch wheatgrass	30
		Unfavorable	1,300	Sandberg bluegrass	5
				Big bluegrass	5
				Lupine	5
				Arrowleaf balsamroot	5
				Prairie junegrass	5
Gwin	009xy001i Shallow Stony 16-22" Ppt Agsp/feid.	Favorable	1,000	Bluebunch wheatgrass	50
		Normal	650	Idaho fescue	15
		Unfavorable	450	Balsamroot	8
				Sandberg bluegrass	5
				Lupine	5
				Biscuitroot	5
McDaniel	009xy002i North Slope Loamy 16-22" Ppt Syal/feid.	Favorable	3,000	Idaho fescue	40
		Normal	2,400	Bluebunch wheatgrass	25
		Unfavorable	1,500	Common snowberry	10
				Arrowleaf balsamroot	5
192 Sudpeak	043ay003i Loamy 22+" Ppt Agsp/feid.	Favorable	3,200	Slender wheatgrass	20
		Normal	2,400	Idaho fescue	20
		Unfavorable	1,500	Bluebunch wheatgrass	15
				Big bluegrass	5
				Basin wildrye	5
				Tapertip hawksbeard	5
				Lupine	5
				Strawberry	5
				Mountain big sagebrush	5
195 Ticanot	043ay004i Fractured Stony Loam 22+" Ppt Arva2/feid.	Favorable	700	Idaho fescue	30
		Normal	500	Bluebunch wheatgrass	10
		Unfavorable	300	Snowberry	10
				Mountain big sagebrush	10
				Elk sedge	5
				Arrowleaf balsamroot	5
200*:					
Van Dusen	010xy010i North Slope Loamy 12-16" Ppt Artrx/agsp.	Favorable	2,200	Bluebunch wheatgrass	30
		Normal	1,600	Idaho fescue	20
		Unfavorable	1,000	Big sagebrush	15
				Sandberg bluegrass	5
				Arrowleaf balsamroot	5
				Tapertip hawksbeard	5
				Antelope bitterbrush	5
Haw	010xy007i Loamy 12-16" Ppt Artrx/agsp.	Favorable	1,900	Bluebunch wheatgrass	35
		Normal	1,200	Thurber needlegrass	15
		Unfavorable	800	Big sagebrush	15
				Sandberg bluegrass	5
				Arrowleaf balsamroot	5
				Tapertip hawksbeard	5

* See description of the map unit for composition and behavior characteristics of the map unit.

Table 7.--Windbreaks and Environmental Plantings

(The symbol < means less than; > means more than. Only the soils suited to windbreaks and environmental plantings are listed. Absence of an entry indicates that trees generally do not grow to the given height on that soil)

Soil name and map symbol	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
1---------- Abo	---	Peking cotoneaster	---	Golden willow, Russian olive, Norway spruce.	Idahybrid poplar.
11*, 12*: Appledellia.					
Odermott---------	---	Siberian peashrub	Rocky Mountain juniper.	---	Russian olive, golden willow, black locust, green ash, cottonwood, Austrian pine, Scotch pine, Norway spruce, ponderosa pine, blue spruce.
15, 16---------- Baldock	---	Peking cotoneaster	---	Golden willow, Russian olive, Norway spruce.	Cottonwood.
17, 18---------- Bissell	---	---	---	Rocky Mountain juniper.	Russian olive, golden willow, black locust, green ash, Austrian pine, Scotch pine, Norway spruce, ponderosa pine, blue spruce.
23*: Brody----------	---	Siberian peashrub, lilac, Amur honeysuckle.	Russian olive, Austrian pine, golden willow.	Ponderosa pine, Douglas fir, Norway spruce.	---
Culdecole.					
30, 31---------- Cashmere	Peking cotoneaster	Tatarian honeysuckle, Siberian peashrub, lilac.	Rocky Mountain juniper, blue spruce.	Russian olive-----	Scotch pine, Austrian pine, black locust, green ash, Lombardy poplar.
32---------- Catherine	Peking cotoneaster, redosier dogwood.	Tatarian honeysuckle, Siberian peashrub, lilac.	Rocky Mountain juniper, Russian olive.	Scotch pine, green ash, Austrian pine, ponderosa pine.	Black locust, black willow.
33*: Chilcott---------	---	European privet, lilac, Nanking cherry, Peking cotoneaster, Siberian peashrub.	Rocky Mountain juniper.	---	Russian olive, idahybrid poplar, golden willow, Scotch pine, Norway spruce, blue spruce.

See footnote at end of table.

Table 7.--Windbreaks and Environmental Plantings--Continued

Soil name and map symbol	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
33*: Vickery	European privet, Peking cotoneaster.	Rocky Mountain juniper, Siberian peashrub.	---	Russian olive, golden willow, black locust, green ash, Austrian pine, Norway spruce, blue spruce.	Scotch pine.
34, 35--- Clems	---	Lilac, Tatarian honeysuckle.	---	---	Russian olive, golden willow, black locust, green ash, idahybrid poplar, ponderosa pine, Austrian pine, Scotch pine, Norway spruce, blue spruce.
38*: Culdecole.					
Brody	---	Siberian peashrub, lilac, Amur honeysuckle.	Russian olive, Austrian pine, golden willow.	Ponderosa pine, Douglas fir, Norway spruce.	---
42, 43--- Damasters	---	Siberian peashrub, Russian olive, lilac, Amur honeysuckle.	Siberian elm, black locust, ponderosa pine, Austrian pine.	---	---
45--- Deshler	---	Lilac, Peking cotoneaster, Tatarian honeysuckle, Nanking cherry.	---	---	Russian olive, golden willow, black locust, green ash, idahybrid poplar, ponderosa pine, Norway spruce, Scotch pine.
63--- Donnel	---	Siberian peashrub, lilac, golden willow, Rocky Mountain juniper.	Ponderosa pine, blue spruce.	---	---
65, 66--- Elijah	---	Siberian peashrub, lilac, Nanking cherry, Peking cotoneaster.	Rocky Mountain juniper.	---	Russian olive, golden willow, black locust, idahybrid poplar, blue spruce, Scotch pine, Norway spruce.
67--- Falk	---	Siberian peashrub, Tatarian honeysuckle.	Rocky Mountain juniper.	Green ash, Norway spruce.	Black locust.

See footnote at end of table.

Table 7.--Windbreaks and Environmental Plantings--Continued

Soil name and map symbol	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
75, 76---------- Gestrin	---	Siberian peashrub, lilac, golden willow, blue spruce, Rocky Mountain juniper.	Ponderosa pine----	Idahybrid poplar	---
82, 83, 84, 85---- Greenleaf	---	Siberian peashrub, lilac, Nanking cherry, Peking cotoneaster, European privet.	Rocky Mountain juniper.	---	Russian olive, golden willow, blue spruce, Norway spruce, idahybrid poplar, Scotch pine.
90*: Gwin----------	Skunkbush sumac, Nanking cherry, Tatarian honeysuckle, lilac, Siberian peashrub.	Rocky Mountain juniper, Russian olive, green ash, Siberian elm.	Austrian pine, ponderosa pine, black locust.	---	---
Rock outcrop.					
91, 92---------- Harpt	---	---	---	---	Russian olive, golden willow, black locust, green ash, idahybrid poplar, ponderosa pine, Austrian pine, Scotch pine, Norway spruce, blue spruce.
93, 94---------- Haw	---	Siberian peashrub, Nanking cherry, Peking cotoneaster, European privet.	Rocky Mountain juniper.	---	Russian olive, golden willow, Scotch pine, Norway spruce, idahybrid poplar, blue spruce.
104---------- Jughandle	---	Siberian peashrub, lilac, Amur honeysuckle, Rocky Mountain juniper.	Russian olive, blue spruce, Austrian pine.	Norway spruce, Douglas fir, ponderosa pine, black locust.	---
105*: Jughandle--------	---	Siberian peashrub, lilac, Amur honeysuckle, Rocky Mountain juniper.	Russian olive, blue spruce, Austrian pine.	Norway spruce, Douglas fir, ponderosa pine, black locust.	---
Suttler----------	---	Siberian peashrub, lilac, Amur honeysuckle.	Russian olive, Siberian elm, black locust, ponderosa pine, Austrian pine, Norway spruce, Douglas fir, blue spruce, golden willow.	---	---

See footnote at end of table.

Table 7.--Windbreaks and Environmental Plantings--Continued

Soil name and map symbol	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
106---------- Kangas	---	Siberian peashrub, lilac, golden willow, Rocky Mountain juniper.	Ponderosa pine----	---	---
108---------- Klickson	---	Siberian peashrub, Russian olive, lilac, Amur honeysuckle, golden willow.	Siberian elm, black locust, ponderosa pine, Austrian pine.	---	---
109*: Klickson---------	---	Siberian peashrub, Russian olive, lilac, Amur honeysuckle, golden willow.	Siberian elm, black locust, ponderosa pine, Austrian pine.	---	---
Rock outcrop.					
110---------- Langrell	European privet, Peking cotoneaster.	Rocky Mountain juniper, lilac, eastern redcedar, Tatarian honeysuckle, Siberian peashrub, Nanking cherry.	Austrian pine, green ash, blue spruce, Russian olive.	Ponderosa pine, Siberian elm, Scotch pine.	Black locust.
111---------- Langrell	---	Nanking cherry, Siberian peashrub, lilac, Tatarian honeysuckle.	---	---	Golden willow, idahybrid poplar, green ash, black locust, Scotch pine, blue spruce, Norway spruce, ponderosa pine.
112, 113, 114, 115---------- Lankbush	---	European privet, Siberian peashrub, Nanking cherry, lilac, Peking cotoneaster.	Rocky Mountain juniper.	---	Russian olive, golden willow, Scotch pine, Norway spruce, blue spruce, idahybrid poplar.
116---------- Lanktree	---	European privet, Siberian peashrub, lilac, Peking cotoneaster, Nanking cherry.	Rocky Mountain juniper.	---	Russian olive, golden willow, idahybrid poplar, Scotch pine, Norway spruce, blue spruce.
118---------- Lanktree	---	Lilac, Tatarian honeysuckle, Nanking cherry.	---	---	Russian olive, golden willow, black locust, green ash, Austrian pine, Scotch pine, Norway spruce, ponderosa pine, blue spruce.

See footnote at end of table.

Table 7.--Windbreaks and Environmental Plantings--Continued

Soil name and map symbol	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
123, 124---------- Lolalita	---	Nanking cherry, Siberian peashrub, lilac, Tatarian honeysuckle.	---	---	Russian olive, golden willow, black locust, green ash, Austrian pine, Scotch pine, Norway spruce, ponderosa pine.
133, 134, 135----- Meland	---	Siberian peashrub, Russian olive, Austrian pine.	Siberian elm, black locust, ponderosa pine.	---	---
140*: Melton.					
Roseberry-------- 	---	Siberian peashrub, lilac, golden willow.	Ponderosa pine, blue spruce, Rocky Mountain juniper.	---	---
147*: Molly------------	Peking cotoneaster	Siberian peashrub, lilac, honeysuckle.	Green ash, Douglas fir, blue spruce, Rocky Mountain juniper, Norway spruce, ponderosa pine.	Golden willow, Siberian elm.	---
Littlesalmon.					
148*: Molly------------	Peking cotoneaster	Siberian peashrub, lilac, honeysuckle.	Green ash, Douglas fir, blue spruce, Rocky Mountain juniper, Norway spruce, ponderosa pine.	Golden willow, Siberian elm.	---
Littlesalmon.					
Rock outcrop.					
150, 151---------- Moulton	---	---	Rocky Mountain juniper.	Green ash, Norway spruce.	Black locust.
152*: Moulton----------	---	---	Rocky Mountain juniper.	Green ash, Norway spruce.	Black locust.
Falk----------	---	Siberian peashrub, Tatarian honeysuckle.	Rocky Mountain juniper.	Green ash, Norway spruce.	Black locust.
154*: Naxaton----------	---	Siberian peashrub, lilac, Amur honeysuckle.	Russian olive, golden willow, green ash, Siberian elm, Austrian pine, ponderosa pine, black locust.	---	---
Nax.					

See footnote at end of table.

Table 7.--Windbreaks and Environmental Plantings--Continued

Soil name and map symbol	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
155, 156, 157----- Newell	---	Lilac, Tatarian honeysuckle, Siberian peashrub.	---	---	Russian olive, golden willow, black locust, green ash, Austrian pine, Scotch pine, Norway spruce, ponderosa pine, blue spruce.
160----------- Nyssaton	---	Lilac, Tatarian honeysuckle, Nanking cherry.	---	---	Russian olive, Scotch pine, black locust, golden willow, Norway spruce.
161*: Odermott---------	---	Siberian peashrub	Rocky Mountain juniper.	---	Russian olive, golden willow, black locust, green ash, cottonwood, Austrian pine, Scotch pine, Norway spruce, ponderosa pine, blue spruce.
Appledellia.					
163----------- Onyx	Peking cotoneaster	Redosier dogwood, lilac, Siberian peashrub.	Rocky Mountain juniper.	Russian olive-----	Scotch pine, Austrian pine, ponderosa pine, black locust, green ash, Lombardy poplar.
164, 165, 166, 167, 168--------- Owyhee	---	Lilac, Tatarian honeysuckle.	Rocky Mountain juniper.	---	Russian olive, Scotch pine, black locust, golden willow, Norway spruce.
169----------- Paniogue	Nanking cherry----	Rocky Mountain juniper, Siberian peashrub, Tatarian honeysuckle, lilac.	Scotch pine, Norway spruce.	Russian olive, golden willow, green ash, Austrian pine, Scotch pine.	---
173*, 174*, 175*: Powar----------	---	Lilac, Peking cotoneaster, Nanking cherry, European privet, Siberian peashrub, Nanking cherry.	Rocky Mountain juniper.	---	Russian olive, Norway spruce, golden willow, idahybrid poplar, Scotch pine.

See footnote at end of table.

Table 7.--Windbreaks and Environmental Plantings--Continued

Soil name and map symbol	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
173*, 174*, 175*: Purdam	---	Siberian peashrub, lilac, European privet, Nanking cherry, Peking cotoneaster.	Rocky Mountain juniper.	---	Russian olive, golden willow, blue spruce, idahybrid poplar, Scotch pine, Norway spruce.
186 Roseberry	---	Siberian peashrub, lilac, golden willow.	Ponderosa pine, blue spruce, Rocky Mountain juniper.	---	---
189, 190 Shoepeg	---	Siberian peashrub, lilac, Rocky Mountain juniper, Tatarian honeysuckle.	Norway spruce	Russian olive, Austrian pine, green ash, Scotch pine, black locust, blue spruce.	Idahybrid poplar.
191*: Starveout.					
Gwin	Skunkbush sumac, Nanking cherry, Tatarian honeysuckle, lilac, Siberian peashrub.	Rocky Mountain juniper, Russian olive, green ash, Siberian elm.	Austrian pine, ponderosa pine, black locust.	---	---
McDaniel.					
193 Swede	---	Siberian peashrub, lilac, golden willow, blue spruce, Rocky Mountain juniper.	Ponderosa pine, Douglas fir.	---	---
196*, 197*, 198*: Tindahay	Nanking cherry	Rocky Mountain juniper, southernwood, lilac.	---	Black locust, Russian olive, Scotch pine, green ash, Austrian pine.	---
Cashmere	Peking cotoneaster	Tatarian honeysuckle, Siberian peashrub, lilac.	Rocky Mountain juniper, blue spruce.	Russian olive	Scotch pine, Austrian pine, black locust, green ash, Lombardy poplar.
201 Wapshilla	---	Siberian peashrub, Russian olive, lilac, Amur honeysuckle.	Siberian elm, black locust, ponderosa pine, Austrian pine.	---	---

* See description of the map unit for composition and behavior characteristics of the map unit.

Table 8.--Recreational Development

(Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "moderate," and "severe." Absence of an entry indicates that the component was not rated)

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1--- Abo	Moderate: dusty.	Moderate: dusty.	Moderate: dusty.	Moderate: dusty.	Slight.
2--- Agerdelly	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: too clayey, slope.	Severe: slope, too clayey.
3--- Agerdelly	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope, too clayey.
4*:					
Agerdelly---	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: too clayey, slope.	Severe: slope, too clayey.
Devnot---	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Severe: large stones, slope, depth to rock.	Moderate: slope.	Severe: slope, depth to rock.
5*:					
Agerdelly---	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope, too clayey.
Devnot---	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Severe: large stones, slope, depth to rock.	Severe: slope.	Severe: slope, depth to rock.
6--- Appledallia	Moderate: dusty.	Moderate: dusty.	Moderate: slope, cemented pan, dusty.	Moderate: dusty.	Moderate: cemented pan.
7--- Appledallia	Moderate: dusty.	Moderate: dusty.	Severe: slope.	Moderate: dusty.	Moderate: cemented pan.
8--- Appledallia	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: slope.	Severe: slope.
9*, 10*:					
Appledallia---	Moderate: slope, dusty.	Moderate: slope, dusty.	Severe: slope.	Moderate: dusty.	Moderate: slope, cemented pan.
Appleshall---	Severe: cemented pan.	Severe: cemented pan.	Severe: slope, small stones, cemented pan.	Slight---	Severe: cemented pan.
11*:					
Appledallia---	Slight---	Slight---	Moderate: slope, cemented pan.	Slight---	Moderate: cemented pan.

See footnote at end of table.

Table 8.--Recreational Development--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
11*:					
Odermott	Slight	Slight	Moderate: slope.	Slight	Slight.
12*:					
Appledellia	Slight	Slight	Severe: slope.	Slight	Moderate: cemented pan.
Odermott	Slight	Slight	Severe: slope.	Slight	Slight.
13*:					
Bakeoven	Severe: slope, large stones.	Severe: slope, large stones.	Severe: large stones, slope, small stones.	Moderate: large stones, slope.	Severe: depth to rock.
Reywat	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Severe: large stones, slope.	Moderate: slope.	Severe: slope, depth to rock.
14*:					
Bakeoven	Severe: slope, large stones.	Severe: slope, large stones.	Severe: large stones, slope, small stones.	Severe: slope.	Severe: depth to rock.
Reywat	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Severe: large stones, slope.	Severe: slope.	Severe: slope, depth to rock.
Rock outcrop.					
15, 16--- Baldock	Severe: flooding.	Moderate: wetness.	Moderate: wetness.	Slight	Slight.
17--- Bissell	Moderate: dusty.	Moderate: dusty.	Moderate: dusty.	Moderate: dusty.	Slight.
18--- Bissell	Moderate: dusty.	Moderate: dusty.	Moderate: slope, dusty.	Moderate: dusty.	Slight.
19--- Blackwell	Severe: flooding, wetness.	Severe: wetness.	Severe: wetness, flooding.	Severe: wetness.	Severe: wetness, flooding.
20--- Bluebell	Severe: slope.	Severe: slope.	Severe: large stones, slope, small stones.	Moderate: slope.	Severe: slope.
21--- Bluebell	Severe: slope.	Severe: slope.	Severe: large stones, slope, small stones.	Severe: slope.	Severe: slope.
22--- Bluesprin	Severe: slope, large stones.	Severe: slope, large stones.	Severe: large stones, slope, small stones.	Severe: slope.	Severe: slope.

See footnote at end of table.

Table 8.--Recreational Development--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
23*:					
Brody	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope, erodes easily.	Severe: slope.
Culdecole	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope, erodes easily.	Severe: slope.
24--- Brownlee	Slight	Slight	Severe: slope.	Severe: erodes easily.	Slight.
25--- Brownlee	Moderate: slope.	Moderate: slope.	Severe: slope.	Severe: erodes easily.	Moderate: slope.
26--- Brownlee	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope, erodes easily.	Severe: slope.
27--- Brownlee	Moderate: dusty.	Moderate: dusty.	Moderate: slope, small stones, dusty.	Severe: erodes easily.	Slight.
28--- Bryan	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
29--- Cabarton	Severe: flooding, wetness.	Severe: wetness.	Severe: wetness, flooding.	Severe: wetness.	Severe: wetness, flooding.
30--- Cashmere	Slight	Slight	Moderate: slope.	Slight	Slight.
31--- Cashmere	Slight	Slight	Severe: slope.	Slight	Slight.
32--- Catherine	Severe: flooding.	Moderate: wetness.	Moderate: wetness, flooding.	Moderate: wetness.	Moderate: wetness, flooding.
33*:					
Chilcott	Moderate: slope, dusty.	Moderate: slope, dusty.	Severe: slope.	Severe: erodes easily.	Moderate: slope, cemented pan.
Vickery	Moderate: slope, dusty.	Moderate: slope, dusty.	Severe: slope.	Severe: erodes easily.	Moderate: slope, cemented pan.
34--- Clems	Slight	Slight	Slight	Slight	Slight.
35--- Clems	Slight	Slight	Moderate: slope.	Slight	Slight.
36--- Cranecreek	Moderate: slope, dusty.	Moderate: slope, dusty.	Severe: slope.	Severe: erodes easily.	Moderate: slope, depth to rock.

See footnote at end of table.

Table 8.--Recreational Development--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
37*:					
Cranecreek	Moderate: slope, dusty.	Moderate: slope, dusty.	Severe: slope.	Severe: erodes easily.	Moderate: slope, depth to rock.
Reywat	Severe: depth to rock.	Severe: depth to rock.	Severe: large stones, slope.	Slight	Severe: depth to rock.
38*:					
Culdecole	Severe: slope.	Severe: slope.	Severe: slope.	Severe: erodes easily.	Severe: slope.
Brody	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope, erodes easily.	Severe: slope.
39--- Dagor	Slight	Moderate: dusty.	Moderate: slope, dusty.	Slight	Slight.
40--- Demast	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: slope.	Severe: slope.
41--- Demast	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
42, 43--- Demasters	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
44--- Demoss	Severe: depth to rock, cemented pan.	Severe: depth to rock, cemented pan.	Severe: depth to rock, cemented pan.	Moderate: dusty.	Severe: depth to rock.
45--- Deshler	Slight	Slight	Moderate: slope, depth to rock.	Slight	Moderate: depth to rock.
46--- Deshler	Moderate: slope.	Moderate: slope.	Severe: slope.	Slight	Moderate: slope, depth to rock.
47, 48--- Deshler	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
49--- Deshler	Severe: slope.	Severe: slope.	Severe: large stones, slope.	Moderate: large stones, slope.	Severe: large stones, slope.
50--- Deshler	Severe: slope.	Severe: slope.	Severe: large stones, slope.	Severe: slope.	Severe: large stones, slope.
51*:					
Deshler	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: slope.	Severe: slope.
Agerdelly	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: too clayey, slope.	Severe: slope, too clayey.

See footnote at end of table.

Table 8.--Recreational Development--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
52*:					
Deshler	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
Agerdally	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope, too clayey.
53*:					
Deshler	Severe: slope.	Severe: slope.	Severe: large stones, slope.	Moderate: large stones, slope.	Severe: large stones, slope.
Agerdally	Severe: slope, large stones.	Severe: slope, large stones.	Severe: large stones, slope.	Moderate: too clayey, slope.	Severe: slope, too clayey.
54*:					
Deshler	Severe: slope.	Severe: slope.	Severe: large stones, slope.	Severe: slope.	Severe: large stones, slope.
Agerdally	Severe: slope, large stones.	Severe: slope, large stones.	Severe: large stones, slope.	Severe: slope.	Severe: slope, too clayey.
55*:					
Deshler	Moderate: dusty.	Moderate: dusty.	Moderate: slope, depth to rock.	Severe: erodes easily.	Moderate: depth to rock.
Brownlee	Slight	Slight	Moderate: slope, small stones.	Severe: erodes easily.	Slight.
56*:					
Deshler	Moderate: slope, dusty.	Moderate: slope, dusty.	Severe: slope.	Severe: erodes easily.	Moderate: slope, depth to rock.
Brownlee	Moderate: slope.	Moderate: slope.	Severe: slope.	Severe: erodes easily.	Moderate: slope.
57*:					
Deshler	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope, erodes easily.	Severe: slope.
Brownlee	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope, erodes easily.	Severe: slope.
58*:					
Deshler	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: slope.	Severe: slope.
Devnot	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Severe: large stones, slope, depth to rock.	Moderate: slope.	Severe: slope, depth to rock.

See footnote at end of table.

Table 8.--Recreational Development--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
59*:					
Deshler	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
Devnot	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Severe: large stones, slope, depth to rock.	Severe: slope.	Severe: slope, depth to rock.
60 Peterson	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
61 Peterson	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: slope.	Severe: slope.
62*:					
Dishner	Severe: slope, large stones, depth to rock.	Severe: slope, large stones, depth to rock.	Severe: large stones, slope, depth to rock.	Moderate: large stones, slope.	Severe: large stones, slope, depth to rock.
Haw	Severe: slope.	Severe: slope.	Severe: slope.	Severe: erodes easily.	Severe: slope.
63 Donnel	Slight	Slight	Moderate: slope, small stones.	Slight	Slight.
64. Duneland					
65 Elijah	Moderate: dusty.	Moderate: dusty.	Severe: slope.	Severe: erodes easily.	Moderate: cemented pan.
66 Elijah	Moderate: slope, dusty.	Moderate: slope, dusty.	Severe: slope.	Severe: erodes easily.	Moderate: slope, cemented pan.
67 Falk	Severe: flooding.	Slight	Slight	Slight	Slight.
68 Gem	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: slope.	Severe: slope.
69 Gem	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
70 Gem	Severe: slope.	Severe: slope.	Severe: large stones, slope.	Moderate: large stones, slope.	Severe: slope.
71*:					
Gem	Severe: slope.	Severe: slope.	Severe: large stones, slope.	Moderate: large stones, slope.	Severe: slope.
Baboven	Severe: slope, large stones.	Severe: slope, large stones.	Severe: large stones, slope, small stones.	Moderate: large stones, slope.	Severe: depth to rock.

See footnote at end of table.

Table 8.--Recreational Development--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
72*:					
Gem	Severe: slope.	Severe: slope.	Severe: large stones, slope.	Severe: slope.	Severe: slope.
Bakeoven	Severe: slope, large stones.	Severe: slope, large stones.	Severe: large stones, slope, small stones.	Severe: slope.	Severe: depth to rock.
73*:					
Gem	Severe: slope.	Severe: slope.	Severe: large stones, slope.	Moderate: large stones, slope.	Severe: slope.
Reywat	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Severe: large stones, slope.	Moderate: slope.	Severe: slope, depth to rock.
74*:					
Gem	Severe: slope.	Severe: slope.	Severe: large stones, slope.	Severe: slope.	Severe: slope.
Reywat	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Severe: large stones, slope.	Severe: slope.	Severe: slope, depth to rock.
75 Gestrin	Severe: flooding.	Slight	Moderate: slope, small stones.	Slight	Slight.
76 Gestrin	Severe: flooding.	Slight	Severe: slope.	Slight	Slight.
77 Glasgow	Slight	Slight	Moderate: slope, depth to rock.	Slight	Moderate: depth to rock.
78 Glasgow	Moderate: slope.	Moderate: slope.	Severe: slope.	Slight	Moderate: slope, depth to rock.
79 Glasgow	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
80*:					
Glasgow	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: slope.	Severe: slope.
Lankbush	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: slope.	Severe: slope.
81*:					
Glasgow	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
Lankbush	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.

See footnote at end of table.

Table 8.--Recreational Development--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
82--Greenleaf	Moderate: dusty.	Moderate: dusty.	Moderate: dusty.	Severe: erodes easily.	Slight.
83--Greenleaf	Moderate: dusty.	Moderate: dusty.	Moderate: slope, dusty.	Severe: erodes easily.	Slight.
84--Greenleaf	Moderate: dusty.	Moderate: dusty.	Severe: slope.	Severe: erodes easily.	Slight.
85--Greenleaf	Moderate: slope, dusty.	Moderate: slope, dusty.	Severe: slope.	Severe: erodes easily.	Moderate: slope.
86, 87--Gross	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
88*, 89*:					
Gross	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
Bakeoven	Severe: slope, large stones.	Severe: slope, large stones.	Severe: large stones, slope, small stones.	Severe: slope.	Severe: depth to rock.
90*:					
Gwin	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Severe: large stones, slope, small stones.	Severe: slope.	Severe: large stones, slope.
Rock outcrop.					
91--Harpt	Moderate: dusty.	Moderate: dusty.	Moderate: slope, dusty.	Moderate: dusty.	Slight.
92--Harpt	Moderate: dusty.	Moderate: dusty.	Severe: slope.	Moderate: dusty.	Slight.
93--Haw	Moderate: dusty.	Moderate: dusty.	Severe: slope.	Severe: erodes easily.	Slight.
94--Haw	Moderate: slope, dusty.	Moderate: slope, dusty.	Severe: slope.	Severe: erodes easily.	Moderate: slope.
95--Haw	Severe: slope.	Severe: slope.	Severe: slope.	Severe: erodes easily.	Severe: slope.
96--Haw	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope, erodes easily.	Severe: slope.
97--Jacknife	Moderate: dusty.	Moderate: dusty.	Moderate: slope.	Moderate: dusty.	Moderate: large stones.
98--Jacknife	Moderate: dusty.	Moderate: dusty.	Severe: slope.	Moderate: dusty.	Moderate: large stones.

See footnote at end of table.

Table 8.--Recreational Development--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
99--- Jacknife	Moderate: slope, dusty.	Moderate: slope, dusty.	Severe: slope.	Moderate: dusty.	Moderate: large stones, slope.
100--- Jacknife	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: slope, dusty.	Severe: slope.
101--- Jacknife	Severe: slope.	Severe: slope.	Severe: large stones, slope, small stones.	Moderate: large stones, slope, dusty.	Severe: large stones, slope.
102--- Jenny	Moderate: too clayey.	Moderate: too clayey.	Moderate: small stones.	Moderate: too clayey.	Severe: too clayey.
103--- Johnson	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
104--- Jughandle	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
105*:					
Jughandle---	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
Suttler---	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope, erodes easily.	Severe: slope.
106--- Kangas	Severe: flooding.	Slight---	Moderate: small stones.	Slight---	Moderate: droughty.
107--- Klicker	Severe: slope.	Severe: slope.	Severe: slope, small stones.	Severe: slope.	Severe: slope.
108--- Klickson	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope, erodes easily.	Severe: slope.
109*:					
Klickson---	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope, erodes easily.	Severe: slope.
Rock outcrop.					
110--- Langrell	Severe: flooding.	Moderate: dusty.	Moderate: small stones, dusty.	Moderate: dusty.	Moderate: droughty.
111--- Langrell	Severe: flooding.	Moderate: small stones, dusty.	Severe: small stones.	Moderate: dusty.	Moderate: small stones, droughty.
112--- Lankbush	Slight---	Slight---	Moderate: slope, small stones.	Slight---	Slight.

See footnote at end of table.

Table 8.--Recreational Development--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
113--Lankbush	Slight	Slight	Severe: slope.	Slight	Slight.
114--Lankbush	Moderate: slope.	Moderate: slope.	Severe: slope.	Slight	Moderate: slope.
115--Lankbush	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: slope.	Severe: slope.
116--Lanktree	Moderate: dusty.	Moderate: dusty.	Moderate: dusty.	Severe: erodes easily.	Slight.
117--Lanktree	Severe: slope.	Severe: slope.	Severe: slope.	Severe: erodes easily.	Severe: slope.
118--Lanktree	Slight	Slight	Severe: slope.	Slight	Slight.
119--Lanktree	Severe: slope, large stones.	Severe: slope, large stones.	Severe: large stones, slope.	Moderate: large stones, slope, dusty.	Severe: large stones, slope.
120*:					
Lanktree	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope, erodes easily.	Severe: slope.
Lankbush	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
121--Ligget	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: slope.	Severe: slope.
122--Ligget	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
123--Lolalita	Slight	Slight	Severe: slope.	Slight	Moderate: droughty.
124--Lolalita	Moderate: slope.	Moderate: slope.	Severe: slope.	Slight	Moderate: droughty, slope.
125--Lolalita	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: slope.	Severe: slope.
126*:					
Lolalita	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
Glasgow	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
127*:					
Lolalita	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
Saralegui	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.

See footnote at end of table.

Table 8.--Recreational Development--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
128*, 129*:					
Lorella	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Severe: large stones, slope, small stones.	Severe: slope.	Severe: slope, depth to rock.
Rock outcrop.					
130 McDaniel	Severe: slope.	Severe: slope.	Severe: slope, small stones.	Severe: slope.	Moderate: small stones, droughty.
131*:					
McDaniel	Severe: slope.	Severe: slope.	Severe: large stones, slope, small stones.	Severe: slope.	Moderate: small stones, large stones, droughty.
Rockly	Severe: slope, small stones, depth to rock.	Severe: slope, small stones, depth to rock.	Severe: large stones, slope, small stones.	Severe: slope.	Severe: small stones, slope, depth to rock.
132*:					
McDaniel	Severe: slope.	Severe: slope.	Severe: large stones, slope, small stones.	Severe: slope.	Moderate: small stones, large stones, droughty.
Starveout	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
133 Meland	Moderate: dusty.	Moderate: dusty.	Severe: slope.	Severe: erodes easily.	Moderate: depth to rock.
134 Meland	Moderate: slope, dusty.	Moderate: slope, dusty.	Severe: slope.	Severe: erodes easily.	Moderate: slope, depth to rock.
135 Meland	Severe: slope.	Severe: slope.	Severe: slope.	Severe: erodes easily.	Severe: slope.
136 Meland	Severe: slope.	Severe: slope.	Severe: large stones, slope, small stones.	Moderate: large stones, slope, dusty.	Severe: slope.
137*:					
Meland	Severe: slope.	Severe: slope.	Severe: slope, small stones.	Moderate: slope, dusty.	Severe: slope.
Riggins	Severe: slope, large stones, depth to rock.	Severe: slope, large stones, depth to rock.	Severe: large stones, slope, small stones.	Moderate: large stones, slope, dusty.	Severe: large stones, droughty, slope.
138*:					
Meland	Severe: slope.	Severe: slope.	Severe: slope, small stones.	Severe: slope.	Severe: slope.

See footnote at end of table.

Table 8.--Recreational Development--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
138*:					
Riggins	Severe: slope, large stones, depth to rock.	Severe: slope, large stones, depth to rock.	Severe: large stones, slope, small stones.	Severe: slope.	Severe: large stones, droughty, slope.
139 Melton	Severe: flooding, wetness.	Moderate: flooding, wetness.	Severe: wetness, flooding.	Moderate: wetness, flooding.	Severe: flooding.
140*:					
Melton	Severe: flooding, wetness.	Moderate: flooding, wetness.	Severe: wetness, flooding.	Moderate: wetness, flooding.	Severe: flooding.
Roseberry	Severe: flooding.	Moderate: wetness.	Moderate: wetness, flooding.	Moderate: wetness.	Moderate: wetness, droughty, flooding.
141 Midvale	Slight	Slight	Slight	Slight	Slight.
142 Midvale	Slight	Slight	Moderate: slope.	Slight	Slight.
143 Midvale	Slight	Slight	Severe: slope.	Slight	Slight.
144 Midvale	Moderate: slope.	Moderate: slope.	Severe: slope.	Slight	Moderate: slope.
145 Midvale	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: slope.	Severe: slope.
146*:					
Midvale	Slight	Slight	Moderate: slope.	Slight	Slight.
Demoss	Severe: depth to rock, cemented pan.	Severe: depth to rock, cemented pan.	Severe: depth to rock, cemented pan.	Moderate: dusty.	Severe: depth to rock.
147*:					
Molly	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope, erodes easily.	Severe: slope.
Littlesalmon	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
148*:					
Molly	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope, erodes easily.	Severe: slope.
Littlesalmon	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
Rock outcrop.					

See footnote at end of table.

Table 8.--Recreational Development--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
149--Moonstone	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
150, 151--Moulton	Severe: flooding.	Moderate: wetness.	Moderate: wetness.	Moderate: wetness.	Moderate: wetness, droughty.
152*:					
Moulton	Severe: flooding.	Moderate: wetness.	Moderate: wetness.	Moderate: wetness.	Moderate: wetness, droughty.
Falk	Severe: flooding.	Slight	Slight	Slight	Slight.
153*:					
Mulett	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Severe: large stones, slope, small stones.	Severe: slope.	Severe: large stones, slope, depth to rock.
Mackey	Severe: slope, large stones, small stones.	Severe: slope, large stones, small stones.	Severe: large stones, slope, small stones.	Severe: slope.	Severe: small stones, large stones, droughty.
154*:					
Nazaton	Severe: slope.	Severe: slope.	Severe: slope, small stones.	Severe: slope.	Severe: slope.
Nax	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
155--Newell	Slight	Slight	Slight	Severe: erodes easily.	Slight.
156--Newell	Slight	Slight	Moderate: slope.	Severe: erodes easily.	Slight.
157--Newell	Slight	Slight	Severe: slope.	Severe: erodes easily.	Slight.
158--Newell	Slight	Slight	Severe: slope.	Slight	Slight.
159--Notus	Severe: flooding.	Slight	Moderate: flooding.	Slight	Moderate: droughty, flooding.
160--Nyssaton	Moderate: dusty.	Moderate: dusty.	Moderate: dusty.	Severe: erodes easily.	Slight.
161*:					
Odermott	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: slope.	Severe: slope.
Appledellia	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: slope.	Severe: slope.

See footnote at end of table.

Table 8.--Recreational Development--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
162--Oldsferry	Severe: slope.	Severe: slope.	Severe: slope, small stones.	Severe: slope.	Severe: slope.
163--Onyx	Moderate: dusty.	Moderate: dusty.	Moderate: dusty.	Moderate: dusty.	Slight.
164--Owyhee	Moderate: dusty.	Moderate: dusty.	Moderate: dusty.	Severe: erodes easily.	Slight.
165--Owyhee	Moderate: dusty.	Moderate: dusty.	Moderate: slope, dusty.	Severe: erodes easily.	Slight.
166--Owyhee	Moderate: dusty.	Moderate: dusty.	Severe: slope.	Severe: erodes easily.	Slight.
167--Owyhee	Moderate: slope, dusty.	Moderate: slope, dusty.	Severe: slope.	Severe: erodes easily.	Moderate: slope.
168--Owyhee	Severe: slope.	Severe: slope.	Severe: slope.	Severe: erodes easily.	Severe: slope.
169--Paniogue	Moderate: dusty.	Moderate: dusty.	Moderate: dusty.	Moderate: dusty.	Slight.
170--Payette	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: slope.	Severe: slope.
171--Payette	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
172*:					
Payette	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
Van Dusen	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
173*:					
Power	Moderate: dusty.	Moderate: dusty.	Moderate: dusty.	Severe: erodes easily.	Slight.
Purdam	Moderate: dusty.	Moderate: dusty.	Moderate: dusty.	Severe: erodes easily.	Moderate: cemented pan.
174*:					
Power	Moderate: dusty.	Moderate: dusty.	Moderate: slope, dusty.	Severe: erodes easily.	Slight.
Purdam	Moderate: dusty.	Moderate: dusty.	Moderate: slope, cemented pan, dusty.	Severe: erodes easily.	Moderate: cemented pan.
175*:					
Power	Moderate: dusty.	Moderate: dusty.	Severe: slope.	Severe: erodes easily.	Slight.

See footnote at end of table.

Table 8.--Recreational Development--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
175*:					
Purdam	Moderate: dusty.	Moderate: dusty.	Severe: slope.	Severe: erodes easily.	Moderate: cemented pan.
176---	Severe:	Severe:	Severe:	Moderate:	Severe:
Riggins	slope, large stones, depth to rock.	slope, large stones, depth to rock.	large stones, slope, small stones.	large stones, slope, dusty.	large stones, droughty, slope.
177, 178---	Severe:	Severe:	Severe:	Severe:	Severe:
Riggins	slope, large stones, depth to rock.	slope, large stones, depth to rock.	large stones, slope, small stones.	slope.	large stones, droughty, slope.
179.					
Riverwash					
180*:					
Rock outcrop.					
Bateoven	Severe: slope, large stones.	Severe: slope, large stones.	Severe: large stones, slope, small stones.	Severe: slope.	Severe: depth to rock.
181---	Severe:	Severe:	Severe:	Severe:	Severe:
Rockly	slope, small stones, depth to rock.	slope, small stones, depth to rock.	large stones, slope, small stones.	slope.	small stones, slope, depth to rock.
182*:					
Rockly	Severe: slope, large stones, small stones.	Severe: slope, large stones, small stones.	Severe: large stones, slope, small stones.	Moderate: slope, dusty.	Severe: small stones, slope, depth to rock.
Riggins	Severe: slope, large stones, depth to rock.	Severe: slope, large stones, depth to rock.	Severe: large stones, slope, small stones.	Moderate: large stones, slope, dusty.	Severe: large stones, droughty, slope.
183*:					
Rockly	Severe: slope, small stones.	Severe: slope, small stones.	Severe: large stones, slope, small stones.	Severe: slope.	Severe: small stones, slope.
Riggins	Severe: slope, large stones, depth to rock.	Severe: slope, large stones, depth to rock.	Severe: large stones, slope, small stones.	Severe: slope.	Severe: large stones, droughty, slope.
184*:					
Rockly	Severe: slope, small stones, depth to rock.	Severe: slope, small stones, depth to rock.	Severe: large stones, slope, small stones.	Severe: slope.	Severe: small stones, slope, depth to rock.
Rock outcrop.					

See footnote at end of table.

Table 8.--Recreational Development--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
185*:					
Rockly	Severe: slope, small stones, depth to rock.	Severe: slope, small stones, depth to rock.	Severe: large stones, slope, small stones.	Severe: slope.	Severe: small stones, slope, depth to rock.
Starveout	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: slope, dusty.	Severe: slope.
McDaniel	Moderate: slope, small stones, dusty.	Moderate: slope, small stones, dusty.	Severe: large stones, slope, small stones.	Moderate: dusty.	Moderate: small stones, large stones, droughty.
186 Roseberry	Severe: flooding.	Moderate: wetness.	Moderate: wetness, flooding.	Moderate: wetness.	Moderate: wetness, droughty, flooding.
187*:					
Shellrock	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: slope.	Severe: slope.
Rock outcrop.					
188*:					
Shellrock	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
Rock outcrop.					
189 Shoepeg	Severe: flooding.	Moderate: wetness, dusty.	Moderate: wetness, dusty.	Moderate: dusty.	Slight.
190 Shoepeg	Severe: flooding.	Moderate: wetness.	Moderate: wetness.	Slight	Slight.
191*:					
Starveout	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: slope, dusty.	Severe: slope.
Gwin	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Severe: large stones, slope, small stones.	Moderate: large stones, slope, dusty.	Severe: large stones, slope.
McDaniel	Severe: slope.	Severe: slope.	Severe: large stones, slope, small stones.	Moderate: slope, dusty.	Moderate: small stones, large stones, droughty.
192 Sudpeak	Moderate: slope.	Moderate: slope.	Severe: slope.	Slight	Moderate: slope.
193 Swede	Moderate: slope.	Moderate: slope.	Severe: slope.	Severe: erodes easily.	Moderate: slope.

See footnote at end of table.

Table 8.--Recreational Development--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
194--Tamred	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
195--Ticanot	Severe: slope, large stones, depth to rock.	Severe: slope, large stones, depth to rock.	Severe: large stones, slope, small stones.	Severe: large stones, slope.	Severe: large stones, slope, depth to rock.
196*:					
Tindahay	Slight	Moderate: too sandy.	Moderate: slope.	Moderate: too sandy.	Severe: droughty.
Cashmere	Slight	Slight	Moderate: slope.	Slight	Slight.
197*:					
Tindahay	Slight	Moderate: too sandy.	Severe: slope.	Moderate: too sandy.	Severe: droughty.
Cashmere	Slight	Slight	Severe: slope.	Slight	Slight.
198*:					
Tindahay	Moderate: slope.	Moderate: slope, too sandy.	Severe: slope.	Moderate: too sandy.	Severe: droughty.
Cashmere	Moderate: slope.	Moderate: slope.	Severe: slope.	Slight	Moderate: slope.
199*--Typic Xerofluvents	Severe: flooding, slope, large stones.	Severe: slope, large stones, too sandy.	Severe: large stones, slope, small stones.	Severe: large stones, too sandy.	Severe: small stones, large stones, droughty.
200*:					
Van Dusen	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
Haw	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope, erodes easily.	Severe: slope.
201--Wapshilla	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope, erodes easily.	Severe: slope.

* See description of the map unit for composition and behavior characteristics of the map unit.

Table 9.--Building Site Development

(Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "moderate," and "severe." Absence of an entry indicates that the component was not rated. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
1---------- Abo	Moderate: wetness.	Slight---------	Moderate: wetness.	Slight---------	Moderate: low strength, frost action.	Slight.
2, 3---------- Agerdelly	Severe: cutbanks cave, slope.	Severe: shrink-swell, slope.	Severe: slope, shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength, slope.	Severe: slope, too clayey.
4*, 5*: Agerdelly---------	Severe: cutbanks cave, slope.	Severe: shrink-swell, slope.	Severe: slope, shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength, slope.	Severe: slope, too clayey.
Devnot-----------	Severe: depth to rock, slope.	Severe: shrink-swell, slope, depth to rock.	Severe: depth to rock, slope, shrink-swell.	Severe: shrink-swell, slope, depth to rock.	Severe: depth to rock, shrink-swell, low strength.	Severe: slope, depth to rock.
6, 7---------- Appledellia	Severe: cutbanks cave.	Severe: shrink-swell.	Moderate: cemented pan.	Severe: shrink-swell.	Severe: shrink-swell, low strength.	Moderate: cemented pan.
8---------- Appledellia	Severe: cutbanks cave, slope.	Severe: shrink-swell, slope.	Severe: slope.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength, slope.	Severe: slope.
9*, 10*: Appledellia------	Severe: cutbanks cave.	Severe: shrink-swell.	Moderate: cemented pan, slope.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength.	Moderate: slope, cemented pan.
Applesbell-------	Severe: cemented pan, cutbanks cave.	Moderate: cemented pan, large stones.	Severe: cemented pan.	Moderate: slope, cemented pan, large stones.	Moderate: cemented pan, frost action.	Severe: cemented pan.
11*, 12*: Appledellia------	Severe: cutbanks cave.	Severe: shrink-swell.	Moderate: cemented pan.	Severe: shrink-swell.	Severe: shrink-swell, low strength.	Moderate: cemented pan.
Odarmott---------	Severe: cutbanks cave.	Severe: shrink-swell.	Slight---------	Severe: shrink-swell.	Severe: shrink-swell, low strength.	Slight.
13*: Bakeoven---------	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: depth to rock.

See footnote at end of table.

Table 9.--Building Site Development--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
13*:						
Reywat	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, low strength, slope.	Severe: slope, depth to rock.
14*:						
Bakeoven	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: depth to rock.
Reywat	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, low strength, slope.	Severe: slope, depth to rock.
Rock outcrop.						
15, 16 Baldock	Severe: wetness.	Severe: flooding.	Severe: flooding, wetness.	Severe: flooding.	Severe: frost action.	Slight.
17, 18 Bissell	Slight	Moderate: shrink-swell.	Moderate: shrink-swell.	Moderate: shrink-swell.	Moderate: shrink-swell, frost action.	Slight.
19 Blackwell	Severe: cutbanks cave, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: wetness, flooding, frost action.	Severe: wetness, flooding.
20, 21 Bluebell	Severe: depth to rock, slope.	Severe: slope.	Severe: depth to rock, slope.	Severe: slope.	Severe: slope.	Severe: slope.
22 Bluesprin	Severe: depth to rock, slope.	Severe: slope.	Severe: depth to rock, slope.	Severe: slope.	Severe: slope.	Severe: slope.
23*:						
Brody	Severe: depth to rock, slope.	Severe: slope.	Severe: depth to rock, slope.	Severe: slope.	Severe: slope.	Severe: slope.
Culdecole	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: low strength, slope.	Severe: slope.
24 Brownlee	Severe: cutbanks cave.	Moderate: shrink-swell.	Moderate: shrink-swell.	Moderate: shrink-swell, slope.	Moderate: shrink-swell, low strength.	Slight.
25 Brownlee	Severe: cutbanks cave.	Moderate: shrink-swell, slope.	Moderate: slope, shrink-swell.	Severe: slope.	Moderate: shrink-swell, low strength, slope.	Moderate: slope.
26 Brownlee	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.

See footnote at end of table.

Table 9.--Building Site Development--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
27---------- Brownlee	Severe: cutbanks cave.	Moderate: shrink-swell.	Moderate: shrink-swell.	Moderate: shrink-swell.	Moderate: shrink-swell, low strength.	Slight.
28---------- Bryan	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
29---------- Cabarton	Severe: wetness.	Severe: flooding, wetness, shrink-swell.	Severe: flooding, wetness, shrink-swell.	Severe: flooding, wetness, shrink-swell.	Severe: shrink-swell, low strength, wetness.	Severe: wetness, flooding.
30---------- Cashmere	Severe: cutbanks cave.	Slight---------	Slight---------	Slight---------	Moderate: frost action.	Slight.
31---------- Cashmere	Severe: cutbanks cave.	Slight---------	Slight---------	Moderate: slope.	Moderate: frost action.	Slight.
32---------- Catherine	Severe: cutbanks cave, wetness.	Severe: flooding.	Severe: flooding, wetness.	Severe: flooding.	Severe: flooding, frost action.	Moderate: wetness, flooding.
33*:						
Chilcott---------	Severe: cemented pan, cutbanks cave.	Severe: shrink-swell.	Severe: cemented pan, shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength.	Moderate: slope, cemented pan.
Vickery----------	Severe: cemented pan, cutbanks cave.	Moderate: slope, cemented pan.	Severe: cemented pan.	Severe: slope.	Moderate: cemented pan, slope.	Moderate: slope, cemented pan.
34, 35---------- Clems	Slight---------	Slight---------	Slight---------	Slight---------	Slight---------	Slight.
36---------- Cranecreek	Moderate: depth to rock, too clayey, slope.	Moderate: shrink-swell, slope.	Moderate: depth to rock, slope, shrink-swell.	Severe: slope.	Severe: low strength.	Moderate: slope, depth to rock.
37*:						
Cranecreek-------	Moderate: depth to rock, too clayey, slope.	Moderate: shrink-swell, slope.	Moderate: depth to rock, slope, shrink-swell.	Severe: slope.	Severe: low strength.	Moderate: slope, depth to rock.
Reywat----------	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock, low strength.	Severe: depth to rock.
38*:						
Culdecole--------	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: low strength, slope.	Severe: slope.
Brody----------	Severe: depth to rock, slope.	Severe: slope.	Severe: depth to rock, slope.	Severe: slope.	Severe: slope.	Severe: slope.
39---------- Dagor	Slight---------	Slight---------	Slight---------	Slight---------	Moderate: frost action.	Slight.

See footnote at end of table.

Table 9.--Building Site Development--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
40, 41---------- Demast	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
42, 43---------- Demasters	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
44---------- Demoss	Severe: depth to rock, cemented pan.	Severe: shrink-swell.	Severe: depth to rock, cemented pan, shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, low strength.	Severe: depth to rock.
45---------- Deshler	Moderate: depth to rock, too clayey.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, low strength.	Moderate: depth to rock.
46---------- Deshler	Moderate: depth to rock, too clayey, slope.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength.	Moderate: slope, depth to rock.
47, 48---------- Deshler	Severe: slope.	Severe: shrink-swell, slope.	Severe: slope, shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength, slope.	Severe: slope.
49, 50---------- Deshler	Severe: slope.	Severe: shrink-swell, slope.	Severe: slope, shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength, slope.	Severe: large stones, slope.
51*, 52*: Deshler----------	Severe: slope.	Severe: shrink-swell, slope.	Severe: slope, shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength, slope.	Severe: slope.
Agerdelly--------	Severe: cutbanks cave, slope.	Severe: shrink-swell, slope.	Severe: slope, shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength, slope.	Severe: slope, too clayey.
53*, 54*: Deshler----------	Severe: slope.	Severe: shrink-swell, slope.	Severe: slope, shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength, slope.	Severe: large stones, slope.
Agerdelly--------	Severe: cutbanks cave, slope.	Severe: shrink-swell, slope.	Severe: slope, shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength, slope.	Severe: slope, too clayey.
55*: Deshler----------	Moderate: depth to rock, too clayey.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, low strength.	Moderate: depth to rock.
Brownlee----------	Severe: cutbanks cave.	Moderate: shrink-swell.	Moderate: shrink-swell.	Moderate: shrink-swell, slope.	Moderate: shrink-swell, low strength.	Slight.

See footnote at end of table.

Table 9.--Building Site Development--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
56*:						
Deshler	Moderate: depth to rock, too clayey, slope.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength.	Moderate: slope, depth to rock.
Brownlee	Severe: cutbanks cave.	Moderate: shrink-swell, slope.	Moderate: slope, shrink-swell.	Severe: slope.	Moderate: shrink-swell, low strength, slope.	Moderate: slope.
57*:						
Deshler	Severe: slope.	Severe: shrink-swell, slope.	Severe: slope, shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength, slope.	Severe: slope.
Brownlee	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
58*, 59*:						
Deshler	Severe: slope.	Severe: shrink-swell, slope.	Severe: slope, shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength, slope.	Severe: slope.
Devnot	Severe: depth to rock, slope.	Severe: shrink-swell, slope, depth to rock.	Severe: depth to rock, slope, shrink-swell.	Severe: shrink-swell, slope, depth to rock.	Severe: depth to rock, shrink-swell, low strength.	Severe: slope, depth to rock.
60, 61 Peterson	Severe: slope.	Severe: shrink-swell, slope.	Severe: slope, shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength, slope.	Severe: slope.
62*:						
Dishmar	Severe: depth to rock, slope.	Severe: shrink-swell, slope, depth to rock.	Severe: depth to rock, slope, shrink-swell.	Severe: shrink-swell, slope, depth to rock.	Severe: depth to rock, shrink-swell, low strength.	Severe: large stones, slope, depth to rock.
Haw	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
63 Donnel	Severe: cutbanks cave.	Slight	Slight	Slight	Slight	Slight.
64. Dumeland						
65 Elijah	Severe: cemented pan, cutbanks cave.	Moderate: shrink-swell, cemented pan.	Severe: cemented pan.	Moderate: shrink-swell, slope, cemented pan.	Severe: low strength.	Moderate: cemented pan.

See footnote at end of table.

Table 9.--Building Site Development--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
66--Elijah	Severe: cemented pan, cutbanks cave.	Moderate: shrink-swell, slope, cemented pan.	Severe: cemented pan.	Severe: slope.	Severe: low strength.	Moderate: slope, cemented pan.
67--Falk	Severe: cutbanks cave.	Severe: flooding.	Severe: flooding.	Severe: flooding.	Severe: frost action.	Slight.
68, 69, 70--Gem	Severe: depth to rock, slope.	Severe: shrink-swell, slope.	Severe: depth to rock, slope, shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength, slope.	Severe: slope.
71*, 72*:						
Gem	Severe: depth to rock, slope.	Severe: shrink-swell, slope.	Severe: depth to rock, slope, shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength, slope.	Severe: slope.
Bakeoven	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: depth to rock.
73*, 74*:						
Gem	Severe: depth to rock, slope.	Severe: shrink-swell, slope.	Severe: depth to rock, slope, shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength, slope.	Severe: slope.
Reywat	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, low strength, slope.	Severe: slope, depth to rock.
75, 76--Gestrin	Severe: cutbanks cave.	Severe: flooding.	Severe: flooding.	Severe: flooding.	Moderate: flooding, frost action.	Slight.
77--Glasgow	Severe: depth to rock.	Severe: shrink-swell.	Severe: depth to rock, shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, low strength.	Moderate: depth to rock.
78--Glasgow	Severe: depth to rock.	Severe: shrink-swell.	Severe: depth to rock, shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength.	Moderate: slope, depth to rock.
79--Glasgow	Severe: depth to rock, slope.	Severe: shrink-swell, slope.	Severe: depth to rock, slope, shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength, slope.	Severe: slope.
80*, 81*:						
Glasgow	Severe: depth to rock, slope.	Severe: shrink-swell, slope.	Severe: depth to rock, slope, shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength, slope.	Severe: slope.
Lankbush	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.

See footnote at end of table.

Table 9.--Building Site Development--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
82, 83---------- Greenleaf	Moderate: cutbanks cave.	Slight---------	Slight---------	Slight---------	Slight---------	Slight.
84---------- Greenleaf	Moderate: cutbanks cave.	Slight---------	Slight---------	Moderate: slope.	Slight---------	Slight.
85---------- Greenleaf	Moderate: cutbanks cave, slope.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope.	Moderate: slope.
86, 87---------- Gross	Severe: depth to rock, slope.	Severe: slope.	Severe: depth to rock, slope.	Severe: slope.	Severe: low strength, slope.	Severe: slope.
88*, 89*: Gross----------	Severe: depth to rock, slope.	Severe: slope.	Severe: depth to rock, slope.	Severe: slope.	Severe: low strength, slope.	Severe: slope.
Baknoven---------	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: depth to rock.
90*: Gwin----------	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: large stones, slope.
Rock outcrop.						
91---------- Harpt	Slight---------	Slight---------	Slight---------	Slight---------	Moderate: frost action.	Slight.
92---------- Harpt	Slight---------	Slight---------	Slight---------	Moderate: slope.	Moderate: frost action.	Slight.
93---------- Haw	Severe: cutbanks cave.	Moderate: shrink-swell.	Slight---------	Moderate: shrink-swell, slope.	Moderate: shrink-swell, low strength.	Slight.
94---------- Haw	Severe: cutbanks cave.	Moderate: shrink-swell, slope.	Moderate: slope.	Severe: slope.	Moderate: shrink-swell, low strength, slope.	Moderate: slope.
95, 96---------- Haw	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
97, 98---------- Jacknife	Moderate: too clayey.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, low strength.	Moderate: large stones.
99---------- Jacknife	Moderate: too clayey, slope.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength.	Moderate: large stones, slope.
100---------- Jacknife	Severe: slope.	Severe: shrink-swell, slope.	Severe: slope, shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength, slope.	Severe: slope.

See footnote at end of table.

Table 9.--Building Site Development--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
101--- Jacknife	Severe: slope.	Severe: shrink-swell, slope.	Severe: slope, shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength, slope.	Severe: large stones, slope.
102--- Jenny	Severe: cutbanks cave.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: low strength, shrink-swell.	Severe: too clayey.
103--- Johnson	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
104--- Jughandle	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
105*:						
Jughandle	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
Suttler	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
106--- Kangas	Severe: cutbanks cave.	Severe: flooding.	Severe: flooding.	Severe: flooding.	Moderate: flooding.	Moderate: droughty.
107--- Klicker	Severe: depth to rock, slope.	Severe: slope.	Severe: depth to rock, slope.	Severe: slope.	Severe: slope.	Severe: slope.
108--- Klickson	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
109*:						
Klickson	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
Rock outcrop.						
110--- Langrell	Moderate: large stones.	Severe: flooding.	Severe: flooding.	Severe: flooding.	Moderate: flooding, frost action, large stones.	Moderate: droughty.
111--- Langrell	Moderate: large stones.	Severe: flooding.	Severe: flooding.	Severe: flooding.	Moderate: flooding, frost action, large stones.	Moderate: small stones, droughty.
112--- Lankbush	Severe: cutbanks cave.	Moderate: shrink-swell.	Moderate: shrink-swell.	Moderate: shrink-swell.	Moderate: shrink-swell.	Slight.
113--- Lankbush	Severe: cutbanks cave.	Moderate: shrink-swell.	Moderate: shrink-swell.	Moderate: shrink-swell, slope.	Moderate: shrink-swell.	Slight.
114--- Lankbush	Severe: cutbanks cave.	Moderate: shrink-swell, slope.	Moderate: slope, shrink-swell.	Severe: slope.	Moderate: shrink-swell, slope.	Moderate: slope.

See footnote at end of table.

Table 9.--Building Site Development--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
115--Lankbush	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
116--Lanktree	Moderate: too clayey.	Slight	Slight	Slight	Slight	Slight.
117--Lanktree	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
118--Lanktree	Moderate: too clayey.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, low strength.	Slight.
119--Lanktree	Severe: slope.	Severe: shrink-swell, slope.	Severe: slope, shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength, slope.	Severe: large stones, slope.
120*:						
Lanktree	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
Lankbush	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
121, 122--Ligget	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
123--Lolalita	Severe: cutbanks cave.	Slight	Slight	Moderate: slope.	Slight	Moderate: droughty.
124--Lolalita	Severe: cutbanks cave.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope.	Moderate: droughty, slope.
125--Lolalita	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
126*:						
Lolalita	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
Glasgow	Severe: depth to rock, slope.	Severe: shrink-swell, slope.	Severe: depth to rock, slope, shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength, slope.	Severe: slope.
127*:						
Lolalita	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
Saralegui	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.

See footnote at end of table.

Table 9.--Building Site Development--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
128*, 129*:						
Lorella	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.
Rock outcrop.						
130--- McDaniel	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: small stones, droughty.
131*:						
McDaniel	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: small stones, large stones, droughty.
Rockly	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: small stones, slope, depth to rock.
132*:						
McDaniel	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: small stones, large stones, droughty.
Starveout	Severe: slope.	Severe: shrink-swell, slope.	Severe: slope, shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength, slope.	Severe: slope.
133--- Meland	Severe: depth to rock.	Moderate: depth to rock.	Severe: depth to rock.	Moderate: slope, depth to rock.	Severe: low strength.	Moderate: depth to rock.
134--- Meland	Severe: depth to rock.	Moderate: slope, depth to rock.	Severe: depth to rock.	Severe: slope.	Severe: low strength.	Moderate: slope, depth to rock.
135, 136--- Meland	Severe: depth to rock, slope.	Severe: slope.	Severe: depth to rock, slope.	Severe: slope.	Severe: low strength, slope.	Severe: slope.
137*, 138*:						
Meland	Severe: depth to rock, slope.	Severe: slope.	Severe: depth to rock, slope.	Severe: slope.	Severe: low strength, slope.	Severe: slope.
Riggins	Severe: depth to rock, large stones, slope.	Severe: slope, depth to rock, large stones.	Severe: depth to rock, slope, large stones.	Severe: slope, depth to rock, large stones.	Severe: depth to rock, slope, large stones.	Severe: large stones, droughty, slope.
139--- Melton	Severe: cutbanks cave, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, frost action.	Severe: flooding.

See footnote at end of table.

Table 9.--Building Site Development--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
140*:						
Melton	Severe: cutbanks cave, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, frost action.	Severe: flooding.
Roseberry	Severe: cutbanks cave, wetness.	Severe: flooding.	Severe: flooding, wetness.	Severe: flooding.	Severe: flooding, frost action.	Moderate: wetness, droughty, flooding.
141, 142, 143 Midvale	Moderate: too clayey.	Severe: shrink-swell.	Slight	Severe: shrink-swell.	Severe: low strength, shrink-swell.	Slight.
144 Midvale	Moderate: too clayey, slope.	Severe: shrink-swell.	Moderate: slope.	Severe: shrink-swell, slope.	Severe: low strength, shrink-swell.	Moderate: slope.
145 Midvale	Severe: slope.	Severe: shrink-swell, slope.	Severe: slope.	Severe: shrink-swell, slope.	Severe: low strength, slope, shrink-swell.	Severe: slope.
146*:						
Midvale	Moderate: too clayey.	Severe: shrink-swell.	Slight	Severe: shrink-swell.	Severe: low strength, shrink-swell.	Slight.
Demoss	Severe: depth to rock, cemented pan.	Severe: shrink-swell.	Severe: depth to rock, cemented pan, shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, low strength.	Severe: depth to rock.
147*:						
Molly	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
Littlesalmon	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
148*:						
Molly	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
Littlesalmon	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
Rock outcrop.						
149 Moonstone	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
150, 151 Moulton	Severe: cutbanks cave, wetness.	Severe: flooding.	Severe: flooding, wetness.	Severe: flooding.	Severe: frost action.	Moderate: wetness, droughty.

See footnote at end of table.

Table 9.--Building Site Development--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
152*:						
Moulton	Severe: cutbanks cave, wetness.	Severe: flooding.	Severe: flooding, wetness.	Severe: flooding.	Severe: frost action.	Moderate: wetness, droughty.
Falk	Severe: cutbanks cave.	Severe: flooding.	Severe: flooding.	Severe: flooding.	Severe: frost action.	Slight.
153*:						
Mulett	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: large stones, slope, depth to rock.
Mackey	Severe: depth to rock, cutbanks cave, slope.	Severe: slope.	Severe: depth to rock, slope.	Severe: slope.	Severe: slope.	Severe: small stones, large stones, droughty.
154*:						
Nazaton	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
Naz	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
155, 156 Newell	Slight	Moderate: shrink-swell.	Moderate: shrink-swell.	Moderate: shrink-swell.	Severe: low strength.	Slight.
157, 158 Newell	Slight	Moderate: shrink-swell.	Moderate: shrink-swell.	Moderate: shrink-swell, slope.	Severe: low strength.	Slight.
159 Notus	Severe: cutbanks cave.	Severe: flooding.	Severe: flooding.	Severe: flooding.	Severe: flooding.	Moderate: droughty, flooding.
160 Nyssaton	Slight	Slight	Slight	Slight	Moderate: low strength.	Slight.
161*:						
Odermott	Severe: cutbanks cave, slope.	Severe: shrink-swell, slope.	Severe: slope.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength, slope.	Severe: slope.
Appledellia	Severe: cutbanks cave, slope.	Severe: shrink-swell, slope.	Severe: slope.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength, slope.	Severe: slope.
162 Oldsferry	Severe: depth to rock, slope.	Severe: slope.	Severe: depth to rock, slope.	Severe: slope.	Severe: slope.	Severe: slope.
163 Onyx	Slight	Slight	Slight	Slight	Severe: frost action.	Slight.
164, 165 Owyhee	Slight	Slight	Slight	Slight	Slight	Slight.

See footnote at end of table.

Table 9.--Building Site Development--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
166---------- Owyhee	Slight---------	Slight---------	Slight---------	Moderate: slope.	Slight---------	Slight.
167---------- Owyhee	Moderate: slope.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope.	Moderate: slope.
168---------- Owyhee	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
169---------- Paniogue	Severe: cutbanks cave.	Slight---------	Slight---------	Slight---------	Moderate: frost action.	Slight.
170, 171---------- Payette	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
172*:						
Payette----------	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
Van Dusen--------	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
173*, 174*:						
Power----------	Slight---------	Moderate: shrink-swell.	Moderate: shrink-swell.	Moderate: shrink-swell.	Moderate: shrink-swell, low strength.	Slight.
Purdam----------	Severe: cutbanks cave.	Moderate: shrink-swell.	Moderate: cemented pan.	Moderate: shrink-swell.	Severe: low strength.	Moderate: cemented pan.
175*:						
Power----------	Slight---------	Moderate: shrink-swell.	Moderate: shrink-swell.	Moderate: shrink-swell, slope.	Moderate: shrink-swell, low strength.	Slight.
Purdam----------	Severe: cutbanks cave.	Moderate: shrink-swell.	Moderate: cemented pan.	Moderate: shrink-swell, slope.	Severe: low strength.	Moderate: cemented pan.
176, 177, 178----- Riggins	Severe: depth to rock, large stones, slope.	Severe: slope, depth to rock, large stones.	Severe: depth to rock, slope, large stones.	Severe: slope, depth to rock, large stones.	Severe: depth to rock, slope, large stones.	Severe: large stones, droughty, slope.
179. Riverwash						
180*: Rock outcrop.						
Bakeoven----------	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: depth to rock.
181---------- Rockly	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: small stones, slope, depth to rock.

See footnote at end of table.

Table 9.--Building Site Development--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
182*:						
Rockly	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: small stones, slope, depth to rock.
Riggins	Severe: depth to rock, large stones, slope.	Severe: slope, depth to rock, large stones.	Severe: depth to rock, slope, large stones.	Severe: slope, depth to rock, large stones.	Severe: depth to rock, slope, large stones.	Severe: large stones, droughty, slope.
183*:						
Rockly	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: small stones, slope.
Riggins	Severe: depth to rock, large stones, slope.	Severe: slope, depth to rock, large stones.	Severe: depth to rock, slope, large stones.	Severe: slope, depth to rock, large stones.	Severe: depth to rock, slope, large stones.	Severe: large stones, droughty, slope.
184*:						
Rockly	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: small stones, slope, depth to rock.
Rock outcrop.						
185*:						
Rockly	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: small stones, slope, depth to rock.
Starvcout	Severe: slope.	Severe: shrink-swell, slope.	Severe: slope, shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength, slope.	Severe: slope.
McDaniel	Moderate: large stones, slope.	Moderate: shrink-swell, slope, large stones.	Moderate: slope, shrink-swell, large stones.	Severe: slope.	Moderate: shrink-swell, slope, frost action.	Moderate: small stones, large stones, droughty.
186 Roseberry	Severe: cutbanks cave, wetness.	Severe: flooding.	Severe: flooding, wetness.	Severe: flooding.	Severe: flooding, frost action.	Moderate: wetness, droughty, flooding.
187*, 188*:						
Shellrock	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
Rock outcrop.						
189, 190 Shoepeg	Severe: cutbanks cave, wetness.	Severe: flooding.	Severe: flooding, wetness.	Severe: flooding.	Severe: low strength.	Slight.

See footnote at end of table.

Table 9.--Building Site Development--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
191*:						
Starveout	Severe: slope.	Severe: shrink-swell, slope.	Severe: slope, shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength, slope.	Severe: slope.
Gwin	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: large stones, slope.
McDaniel	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: small stones, large stones, droughty.
192 Sudpeak	Moderate: too clayey, wetness, slope.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength.	Moderate: slope.
193 Swede	Moderate: slope.	Moderate: shrink-swell, slope.	Moderate: slope, shrink-swell.	Severe: slope.	Severe: low strength.	Moderate: slope.
194 Tamred	Severe: depth to rock, large stones, slope.	Severe: slope, large stones.	Severe: depth to rock, slope, large stones.	Severe: slope, large stones.	Severe: slope, large stones.	Severe: slope.
195 Ticanot	Severe: depth to rock, large stones, slope.	Severe: shrink-swell, slope, depth to rock.	Severe: depth to rock, slope, shrink-swell.	Severe: shrink-swell, slope, depth to rock.	Severe: depth to rock, shrink-swell, low strength.	Severe: large stones, slope, depth to rock.
196*:						
Tindahay	Severe: cutbanks cave.	Slight	Slight	Slight	Slight	Severe: droughty.
Cashmere	Severe: cutbanks cave.	Slight	Slight	Slight	Moderate: frost action.	Slight.
197*:						
Tindahay	Severe: cutbanks cave.	Slight	Slight	Moderate: slope.	Slight	Severe: droughty.
Cashmere	Severe: cutbanks cave.	Slight	Slight	Moderate: slope.	Moderate: frost action.	Slight.
198*:						
Tindahay	Severe: cutbanks cave.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope.	Severe: droughty.
Cashmere	Severe: cutbanks cave.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope, frost action.	Moderate: slope.
199* Typic Xerofluvents	Severe: cutbanks cave, large stones, wetness.	Severe: flooding, slope, large stones.	Severe: flooding, wetness, slope.	Severe: flooding, slope, large stones.	Severe: slope, flooding, large stones.	Severe: small stones, large stones, droughty.

See footnote at end of table.

Table 9.--Building Site Development--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
200*:						
Van Dusen	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
Haw	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
201 Wapshilla	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.

* See description of the map unit for composition and behavior characteristics of the map unit.

Table 10.--Sanitary Facilities

(Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "good," and other terms. Absence of an entry indicates that the component was not rated. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
1---------- Abo	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Fair: wetness.
2, 3---------- Agerdelly	Severe: percs slowly, slope.	Severe: slope.	Severe: slope, too clayey.	Severe: slope.	Poor: too clayey, hard to pack, slope.
4*, 5*: Agerdelly----------	Severe: percs slowly, slope.	Severe: slope.	Severe: slope, too clayey.	Severe: slope.	Poor: too clayey, hard to pack, slope.
Devnot----------	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope, too clayey.	Severe: depth to rock, slope.	Poor: depth to rock, too clayey, hard to pack.
6, 7---------- Appledellia	Severe: cemented pan, percs slowly, poor filter.	Severe: seepage, cemented pan.	Severe: seepage, too sandy.	Severe: cemented pan, seepage.	Poor: cemented pan, seepage, too sandy.
8---------- Appledellia	Severe: cemented pan, percs slowly, poor filter.	Severe: seepage, cemented pan, slope.	Severe: seepage, slope, too sandy.	Severe: cemented pan, seepage, slope.	Poor: cemented pan, seepage, too sandy.
9*, 10*: Appledellia--------	Severe: cemented pan, percs slowly, poor filter.	Severe: seepage, cemented pan, slope.	Severe: seepage, too sandy.	Severe: cemented pan, seepage.	Poor: cemented pan, seepage, too sandy.
Appleshall---------	Severe: cemented pan, poor filter.	Severe: seepage, cemented pan.	Severe: seepage, too sandy, large stones.	Severe: cemented pan, seepage.	Poor: cemented pan, seepage, too sandy.
11*, 12*: Appledellia--------	Severe: cemented pan, percs slowly, poor filter.	Severe: seepage, cemented pan.	Severe: seepage, too sandy.	Severe: cemented pan, seepage.	Poor: cemented pan, seepage, too sandy.
Odenmott----------	Severe: percs slowly, poor filter.	Severe: seepage.	Severe: seepage, too sandy.	Severe: seepage.	Poor: seepage, too sandy, small stones.

See footnote at end of table.

Table 10.--Sanitary Facilities--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
13*:					
Bakeoven	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.
Reywat	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, large stones, slope.
14*:					
Bakeoven	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.
Reywat	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, large stones, slope.
Rock outcrop.					
15, 16 Baldock	Severe: wetness.	Severe: seepage, wetness.	Severe: seepage, wetness.	Severe: wetness.	Fair: wetness.
17 Bissell	Severe: percs slowly.	Moderate: seepage.	Slight	Slight	Good.
18 Bissell	Severe: percs slowly.	Moderate: seepage, slope.	Slight	Slight	Good.
19 Blackwell	Severe: flooding, wetness, percs slowly.	Severe: flooding, wetness.	Severe: flooding, wetness, too sandy.	Severe: flooding, wetness.	Poor: too sandy, wetness.
20, 21 Bluebell	Severe: depth to rock, percs slowly, slope.	Severe: depth to rock, slope, large stones.	Severe: depth to rock, slope, large stones.	Severe: depth to rock, slope.	Poor: depth to rock, large stones, slope.
22 Bluesprin	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, seepage, small stones.
23*:					
Brody	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, small stones, slope.
Culdecole	Severe: percs slowly, slope.	Severe: slope.	Severe: depth to rock, slope.	Severe: slope.	Poor: slope.
24 Brownlee	Severe: percs slowly.	Moderate: seepage, slope.	Moderate: too clayey.	Slight	Fair: too clayey, thin layer.

See footnote at end of table.

Table 10.--Sanitary Facilities--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
25--Brownlee	Severe: percs slowly.	Severe: slope.	Moderate: slope, too clayey.	Moderate: slope.	Fair: too clayey, slope, thin layer.
26--Brownlee	Severe: percs slowly, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Poor: slope.
27--Brownlee	Severe: percs slowly.	Moderate: seepage, slope.	Moderate: too clayey.	Slight	Fair: too clayey, thin layer.
28--Bryan	Severe: poor filter, slope.	Severe: seepage, slope.	Severe: seepage, slope.	Severe: seepage, slope.	Poor: slope.
29--Cabarton	Severe: flooding, wetness, percs slowly.	Severe: flooding.	Severe: flooding, wetness, too clayey.	Severe: flooding, wetness.	Poor: too clayey, hard to pack, wetness.
30, 31--Cashmere	Slight	Severe: seepage.	Slight	Slight	Good.
32--Catherine	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Fair: wetness.
33*:					
Chilcott	Severe: cemented pan, percs slowly.	Severe: seepage, cemented pan, slope.	Severe: cemented pan.	Moderate: slope.	Poor: cemented pan, hard to pack.
Vickery	Severe: cemented pan.	Severe: seepage, cemented pan, slope.	Severe: cemented pan, too sandy.	Moderate: slope.	Poor: cemented pan, seepage, too sandy.
34, 35--Clems	Severe: percs slowly.	Severe: seepage.	Slight	Slight	Good.
36--Cranecreek	Severe: depth to rock, percs slowly.	Severe: depth to rock, slope.	Severe: depth to rock, too clayey.	Severe: depth to rock.	Poor: depth to rock, too clayey.
37*:					
Cranecreek	Severe: depth to rock, percs slowly.	Severe: depth to rock, slope.	Severe: depth to rock, too clayey.	Severe: depth to rock.	Poor: depth to rock, too clayey.
Reywat	Severe: depth to rock.	Severe: depth to rock, slope.	Severe: depth to rock.	Severe: depth to rock.	Poor: depth to rock, large stones.
38*:					
Culdecole	Severe: percs slowly, slope.	Severe: slope.	Severe: depth to rock, slope.	Severe: slope.	Poor: slope.

See footnote at end of table.

Table 10.--Sanitary Facilities--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
38*:					
Brody	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, small stones, slope.
39---------- Dagor	Moderate: percs slowly.	Moderate: seepage, slope.	Slight----------	Slight----------	Good.
40, 41---------- Demast	Severe: percs slowly, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Poor: small stones, slope.
42, 43---------- Demasters	Severe: slope.	Severe: slope.	Severe: depth to rock, slope.	Severe: slope.	Poor: small stones, slope.
44---------- Demoss	Severe: depth to rock, cemented pan.	Severe: depth to rock, cemented pan.	Severe: depth to rock, too clayey.	Severe: depth to rock, cemented pan.	Poor: depth to rock, too clayey, hard to pack.
45---------- Deshler	Severe: depth to rock, percs slowly.	Severe: depth to rock.	Severe: depth to rock, too clayey.	Severe: depth to rock.	Poor: depth to rock, too clayey, hard to pack.
46---------- Deshler	Severe: depth to rock, percs slowly.	Severe: depth to rock, slope.	Severe: depth to rock, too clayey.	Severe: depth to rock.	Poor: depth to rock, too clayey, hard to pack.
47, 48, 49, 50------ Deshler	Severe: depth to rock, percs slowly, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope, too clayey.	Severe: depth to rock, slope.	Poor: depth to rock, too clayey, hard to pack.
51*, 52*, 53*, 54*:					
Deshler----------	Severe: depth to rock, percs slowly, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope, too clayey.	Severe: depth to rock, slope.	Poor: depth to rock, too clayey, hard to pack.
Agerdelly----------	Severe: percs slowly, slope.	Severe: slope.	Severe: slope, too clayey.	Severe: slope.	Poor: too clayey, hard to pack, slope.
55*:					
Deshler----------	Severe: depth to rock, percs slowly.	Severe: depth to rock.	Severe: depth to rock, too clayey.	Severe: depth to rock.	Poor: depth to rock, too clayey, hard to pack.
Brownlee----------	Severe: percs slowly.	Moderate: seepage, slope.	Moderate: too clayey.	Slight----------	Fair: too clayey, thin layer.

See footnote at end of table.

Table 10.--Sanitary Facilities--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
56*:					
Deshler	Severe: depth to rock, percs slowly.	Severe: depth to rock, slope.	Severe: depth to rock, too clayey.	Severe: depth to rock.	Poor: depth to rock, too clayey, hard to pack.
Brownlee	Severe: percs slowly.	Severe: slope.	Moderate: slope, too clayey.	Moderate: slope.	Fair: too clayey, slope, thin layer.
57*:					
Deshler	Severe: depth to rock, percs slowly, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope, too clayey.	Severe: depth to rock, slope.	Poor: depth to rock, too clayey, hard to pack.
Brownlee	Severe: percs slowly, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Poor: slope.
58*, 59*:					
Deshler	Severe: depth to rock, percs slowly, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope, too clayey.	Severe: depth to rock, slope.	Poor: depth to rock, too clayey, hard to pack.
Devnot	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope, too clayey.	Severe: depth to rock, slope.	Poor: depth to rock, too clayey, hard to pack.
60, 61 Peterson	Severe: percs slowly, slope.	Severe: slope.	Severe: slope, too clayey.	Severe: slope.	Poor: too clayey, hard to pack, slope.
62*:					
Dishner	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock, hard to pack, slope.
Haw	Severe: percs slowly, poor filter, slope.	Severe: seepage, slope.	Severe: slope.	Severe: slope.	Poor: slope.
63 Donnel	Slight	Severe: seepage.	Severe: seepage.	Severe: seepage.	Good.
64. Dunelend					
65 Elijah	Severe: cemented pan.	Severe: seepage, cemented pan.	Severe: cemented pan, too sandy.	Slight	Poor: cemented pan, seepage, too sandy.

See footnote at end of table.

Table 10.--Sanitary Facilities--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
66--- Elijah	Severe: cemented pan.	Severe: seepage, cemented pan, slope.	Severe: cemented pan, too sandy.	Moderate: slope.	Poor: cemented pan, seepage, too sandy.
67--- Falk	Severe: wetness, poor filter.	Severe: seepage, wetness.	Severe: seepage, wetness.	Severe: seepage, wetness.	Poor: thin layer.
68, 69, 70--- Gem	Severe: depth to rock, percs slowly, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope, too clayey.	Severe: depth to rock, slope.	Poor: depth to rock, too clayey, hard to pack.
71*, 72*: Gem---	Severe: depth to rock, percs slowly, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope, too clayey.	Severe: depth to rock, slope.	Poor: depth to rock, too clayey, hard to pack.
Bakeoven---	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.
73*, 74*: Gem---	Severe: depth to rock, percs slowly, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope, too clayey.	Severe: depth to rock, slope.	Poor: depth to rock, too clayey, hard to pack.
Reywat---	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, large stones, slope.
75, 76--- Gastrin	Severe: wetness.	Severe: seepage, wetness.	Severe: seepage, wetness.	Severe: seepage, wetness.	Fair: wetness.
77--- Glasgow	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Slight---	Poor: depth to rock, hard to pack.
78--- Glasgow	Severe: depth to rock.	Severe: depth to rock, slope.	Severe: depth to rock.	Moderate: slope.	Poor: depth to rock, hard to pack.
79--- Glasgow	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock, hard to pack, slope.
80*, 81*: Glasgow---	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock, hard to pack, slope.
Lankbush---	Severe: percs slowly, slope.	Severe: seepage, slope.	Severe: slope.	Severe: slope.	Poor: slope.

See footnote at end of table.

Table 10.--Sanitary Facilities--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
82---------- Greenleaf	Severe: percs slowly.	Slight----------	Slight----------	Slight----------	Good.
83, 84---------- Greenleaf	Severe: percs slowly.	Moderate: slope.	Slight----------	Slight----------	Good.
85---------- Greenleaf	Severe: percs slowly.	Severe: slope.	Moderate: slope.	Moderate: slope.	Fair: slope.
86, 87---------- Gross	Severe: depth to rock, percs slowly, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.
88*, 89*: Gross----------	Severe: depth to rock, percs slowly, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.
Bakeoven----------	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.
90*: Gwin----------	Severe: depth to rock, slope.	Severe: depth to rock, slope, large stones.	Severe: depth to rock, slope, large stones.	Severe: depth to rock, slope.	Poor: depth to rock, small stones, slope.
Rock outcrop.					
91, 92---------- Harpt	Severe: percs slowly.	Severe: seepage.	Slight----------	Severe: seepage.	Good.
93---------- Haw	Severe: percs slowly, poor filter.	Severe: seepage.	Slight----------	Slight----------	Fair: thin layer.
94---------- Haw	Severe: percs slowly, poor filter.	Severe: seepage, slope.	Moderate: slope.	Moderate: slope.	Fair: slope, thin layer.
95, 96---------- Haw	Severe: percs slowly, poor filter, slope.	Severe: seepage, slope.	Severe: slope.	Severe: slope.	Poor: slope.
97, 98---------- Jacknife	Severe: percs slowly.	Moderate: seepage, slope.	Severe: too clayey.	Slight----------	Poor: too clayey, hard to pack.
99---------- Jacknife	Severe: percs slowly.	Severe: slope.	Severe: too clayey.	Moderate: slope.	Poor: too clayey, hard to pack.
100---------- Jacknife	Severe: percs slowly, slope.	Severe: slope.	Severe: slope, too clayey.	Severe: slope.	Poor: too clayey, hard to pack, slope.

See footnote at end of table.

Table 10.--Sanitary Facilities--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
101---------- Jacknife	Severe: percs slowly, slope.	Severe: slope.	Severe: slope, too clayey, large stones.	Severe: slope.	Poor: too clayey, hard to pack, slope.
102---------- Jenny	Severe: percs slowly.	Slight----------	Severe: too clayey.	Slight----------	Poor: too clayey, hard to pack.
103---------- Johnson	Severe: slope.	Severe: seepage, slope.	Severe: depth to rock, slope.	Severe: slope.	Poor: slope.
104---------- Jughandle	Severe: slope.	Severe: seepage, slope.	Severe: depth to rock, seepage, slope.	Severe: seepage, slope.	Poor: slope.
105*:					
Jughandle----------	Severe: slope.	Severe: seepage, slope.	Severe: depth to rock, seepage, slope.	Severe: seepage, slope.	Poor: slope.
Suttler----------	Severe: slope.	Severe: slope.	Severe: depth to rock, slope.	Severe: slope.	Poor: slope.
106---------- Kangas	Severe: poor filter.	Severe: seepage.	Severe: seepage.	Severe: seepage.	Fair: too sandy, small stones, thin layer.
107---------- Klicker	Severe: depth to rock, percs slowly, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, small stones, slope.
108---------- Klickson	Severe: percs slowly, slope.	Severe: slope.	Severe: slope, large stones.	Severe: slope.	Poor: small stones, slope.
109*:					
Klickson----------	Severe: percs slowly, slope.	Severe: slope.	Severe: slope, large stones.	Severe: slope.	Poor: small stones, slope.
Rock outcrop.					
110---------- Langrell	Moderate: flooding, percs slowly, large stones.	Severe: seepage.	Severe: seepage, large stones.	Severe: seepage.	Poor: seepage, small stones.
111---------- Langrell	Moderate: flooding, percs slowly, large stones.	Moderate: seepage, large stones.	Severe: large stones.	Moderate: flooding.	Poor: seepage, small stones.
112, 113---------- Lankbush	Severe: percs slowly.	Severe: seepage.	Slight----------	Slight----------	Fair: thin layer.

See footnote at end of table.

Table 10.--Sanitary Facilities--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
114---------- Lankbush	Severe: percs slowly.	Severe: seepage, slope.	Moderate: slope.	Moderate: slope.	Fair: slope, thin layer.
115---------- Lankbush	Severe: percs slowly, slope.	Severe: seepage, slope.	Severe: slope.	Severe: slope.	Poor: slope.
116---------- Lanktree	Moderate: percs slowly.	Moderate: seepage.	Slight----------	Slight----------	Fair: thin layer.
117---------- Lanktree	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Poor: slope.
118---------- Lanktree	Severe: percs slowly.	Moderate: seepage, slope.	Slight----------	Slight----------	Good.
119---------- Lanktree	Severe: percs slowly, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Poor: slope.
120*:					
Lanktree----------	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Poor: slope.
Lankbush----------	Severe: percs slowly, slope.	Severe: seepage, slope.	Severe: slope.	Severe: slope.	Poor: slope.
121, 122---------- Ligget	Severe: slope.	Severe: seepage, slope.	Severe: depth to rock, seepage, slope.	Severe: seepage, slope.	Poor: slope.
123---------- Lolalita	Severe: poor filter.	Severe: seepage.	Slight----------	Slight----------	Good.
124---------- Lolalita	Severe: poor filter.	Severe: seepage, slope.	Moderate: slope.	Moderate: slope.	Fair: slope.
125---------- Lolalita	Severe: poor filter, slope.	Severe: seepage, slope.	Severe: slope.	Severe: slope.	Poor: slope.
126*:					
Lolalita----------	Severe: poor filter, slope.	Severe: seepage, slope.	Severe: slope.	Severe: slope.	Poor: slope.
Glasgow----------	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock, hard to pack, slope.
127*:					
Lolalita----------	Severe: poor filter, slope.	Severe: seepage, slope.	Severe: slope.	Severe: slope.	Poor: slope.

See footnote at end of table.

Table 10.--Sanitary Facilities--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
127*:					
Saralegui	Severe: slope.	Severe: seepage, slope.	Severe: slope.	Severe: slope.	Poor: slope.
128*, 129*:					
Lorella	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, small stones, slope.
Rock outcrop.					
130					
McDaniel	Severe: percs slowly, slope.	Severe: slope.	Severe: slope, large stones.	Severe: slope.	Poor: small stones, slope.
131*:					
McDaniel	Severe: percs slowly, slope.	Severe: slope.	Severe: slope, large stones.	Severe: slope.	Poor: small stones, slope.
Rockly	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.
132*:					
McDaniel	Severe: percs slowly, slope.	Severe: slope.	Severe: slope, large stones.	Severe: slope.	Poor: small stones, slope.
Starveout	Severe: percs slowly, slope.	Severe: slope.	Severe: slope, too clayey.	Severe: slope.	Poor: too clayey, hard to pack, slope.
133					
Meland	Severe: depth to rock, percs slowly.	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Poor: depth to rock.
134					
Meland	Severe: depth to rock, percs slowly.	Severe: depth to rock, slope.	Severe: depth to rock.	Severe: depth to rock.	Poor: depth to rock.
135					
Meland	Severe: depth to rock, percs slowly, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.
136					
Meland	Severe: depth to rock, percs slowly, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, small stones, slope.
137*, 138*:					
Meland	Severe: depth to rock, percs slowly, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, small stones, slope.

See footnote at end of table.

Table 10.--Sanitary Facilities--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
137*, 138*:					
Riggins	Severe: depth to rock, slope, large stones.	Severe: depth to rock, slope, large stones.	Severe: depth to rock, slope, large stones.	Severe: depth to rock, slope.	Poor: depth to rock, large stones, slope.
139	Severe:	Severe:	Severe:	Severe:	Poor:
Melton	flooding, wetness, poor filter.	seepage, flooding, wetness.	flooding, seepage, wetness.	flooding, seepage, wetness.	seepage, too sandy, large stones.
140*:					
Melton	Severe: flooding, wetness, poor filter.	Severe: seepage, flooding, wetness.	Severe: flooding, seepage, wetness.	Severe: flooding, seepage, wetness.	Poor: seepage, too sandy, large stones.
Roseberry	Severe: flooding, wetness.	Severe: seepage, flooding, wetness.	Severe: flooding, seepage, wetness.	Severe: flooding, seepage, wetness.	Fair: wetness, thin layer.
141	Severe:	Slight	Slight	Slight	Good.
Midvale	percs slowly.				
142, 143	Severe:	Moderate:	Slight	Slight	Good.
Midvale	percs slowly.	slope.			
144	Severe:	Severe:	Moderate:	Moderate:	Fair:
Midvale	percs slowly.	slope.	slope.	slope.	slope.
145	Severe:	Severe:	Severe:	Severe:	Poor:
Midvale	percs slowly, slope.	slope.	slope.	slope.	slope.
146*:					
Midvale	Severe: percs slowly.	Moderate: slope.	Slight	Slight	Good.
Demoss	Severe: depth to rock, cemented pan.	Severe: depth to rock, cemented pan.	Severe: depth to rock, too clayey.	Severe: depth to rock, cemented pan.	Poor: depth to rock, too clayey, hard to pack.
147*:					
Molly	Severe: slope.	Severe: seepage, slope.	Severe: depth to rock, seepage, slope.	Severe: seepage, slope.	Poor: small stones, slope.
Littlesalmon	Severe: poor filter, slope.	Severe: seepage, slope.	Severe: depth to rock, seepage, slope.	Severe: seepage, slope.	Poor: seepage, large stones, slope.
148*:					
Molly	Severe: slope.	Severe: seepage, slope.	Severe: depth to rock, seepage, slope.	Severe: seepage, slope.	Poor: small stones, slope.

See footnote at end of table.

Table 10.--Sanitary Facilities--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
148*:					
Littlesalmon	Severe: poor filter, slope.	Severe: seepage, slope.	Severe: depth to rock, seepage, slope.	Severe: seepage, slope.	Poor: seepage, large stones, slope.
Rock outcrop.					
149--- Moonstone	Severe: depth to rock, slope.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage, slope.	Severe: depth to rock, seepage, slope.	Poor: depth to rock, slope.
150, 151--- Moulton	Severe: wetness, poor filter.	Severe: seepage, wetness.	Severe: seepage, wetness, too sandy.	Severe: seepage, wetness.	Poor: seepage, too sandy, small stones.
152*:					
Moulton	Severe: wetness, poor filter.	Severe: seepage, wetness.	Severe: seepage, wetness, too sandy.	Severe: seepage, wetness.	Poor: seepage, too sandy, small stones.
Falk	Severe: wetness, poor filter.	Severe: seepage, wetness.	Severe: seepage, wetness.	Severe: seepage, wetness.	Poor: thin layer.
153*:					
Mulatt	Severe: depth to rock, slope.	Severe: depth to rock, slope, large stones.	Severe: depth to rock, slope, large stones.	Severe: slope.	Poor: depth to rock, small stones, slope.
Mackey	Severe: depth to rock, slope.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, slope, large stones.	Severe: slope.	Poor: depth to rock, seepage, small stones.
154*:					
Nazaton	Severe: slope.	Severe: seepage, slope.	Severe: seepage, slope, large stones.	Severe: seepage, slope.	Poor: small stones, slope.
Naz	Severe: slope.	Severe: seepage, slope.	Severe: seepage, slope.	Severe: seepage, slope.	Poor: slope.
155--- Newell	Severe: percs slowly.	Slight	Moderate: too clayey.	Slight	Fair: too clayey.
156, 157--- Newell	Severe: percs slowly.	Moderate: slope.	Moderate: too clayey.	Slight	Fair: too clayey.
158--- Newell	Severe: percs slowly.	Severe: slope.	Moderate: too clayey.	Slight	Poor: hard to pack.

See footnote at end of table.

Table 10.--Sanitary Facilities--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
159--Notus	Severe: flooding, wetness, poor filter.	Severe: seepage, flooding, wetness.	Severe: flooding, seepage, wetness.	Severe: flooding, seepage, wetness.	Poor: seepage, too sandy, small stones.
160--Nyssaton	Severe: percs slowly.	Slight	Slight	Slight	Good.
161*:					
Odarmott	Severe: percs slowly, poor filter, slope.	Severe: seepage, slope.	Severe: seepage, slope, too sandy.	Severe: seepage, slope.	Poor: seepage, too sandy, small stones.
Appledellia	Severe: cemented pan, percs slowly, poor filter.	Severe: seepage, cemented pan, slope.	Severe: seepage, slope, too sandy.	Severe: cemented pan, seepage, slope.	Poor: cemented pan, seepage, too sandy.
162--Oldsferry	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, small stones, slope.
163--Onyx	Moderate: percs slowly.	Moderate: seepage.	Slight	Slight	Good.
164--Owyhee	Severe: percs slowly.	Moderate: seepage.	Slight	Slight	Good.
165, 166--Owyhee	Severe: percs slowly.	Moderate: seepage, slope.	Slight	Slight	Good.
167--Owyhee	Severe: percs slowly.	Severe: slope.	Moderate: slope.	Moderate: slope.	Fair: slope.
168--Owyhee	Severe: percs slowly, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Poor: slope.
169--Paniogue	Severe: poor filter.	Severe: seepage.	Severe: too sandy.	Slight	Poor: seepage, too sandy, small stones.
170, 171--Payette	Severe: poor filter, slope.	Severe: seepage, slope.	Severe: slope, too sandy.	Severe: slope.	Poor: seepage, too sandy, slope.
172*:					
Payette	Severe: poor filter, slope.	Severe: seepage, slope.	Severe: slope, too sandy.	Severe: slope.	Poor: seepage, too sandy, slope.
Van Dusen	Severe: percs slowly, slope.	Severe: seepage, slope.	Severe: seepage, slope.	Severe: slope.	Poor: slope.

See footnote at end of table.

Table 10.--Sanitary Facilities--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
173*:					
Power	Severe: percs slowly.	Moderate: seepage.	Slight	Slight	Good.
Purdam	Severe: cemented pan.	Severe: seepage, cemented pan.	Severe: too sandy.	Slight	Poor: cemented pan, too sandy, small stones.
174*, 175*:					
Power	Severe: percs slowly.	Moderate: seepage, slope.	Slight	Slight	Good.
Purdam	Severe: cemented pan.	Severe: seepage, cemented pan.	Severe: too sandy.	Slight	Poor: cemented pan, too sandy, small stones.
176, 177, 178 Riggins	Severe: depth to rock, slope, large stones.	Severe: depth to rock, slope, large stones.	Severe: depth to rock, slope, large stones.	Severe: depth to rock, slope.	Poor: depth to rock, large stones, slope.
179. Riverwash					
180*: Rock outcrop.					
Bakeoven	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.
181 Rockly	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.
182*, 183*:					
Rockly	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.
Riggins	Severe: depth to rock, slope, large stones.	Severe: depth to rock, slope, large stones.	Severe: depth to rock, slope, large stones.	Severe: depth to rock, slope.	Poor: depth to rock, large stones, slope.
184*:					
Rockly	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.
Rock outcrop.					
185*:					
Rockly	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.

See footnote at end of table.

Table 10.--Sanitary Facilities--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
185*:					
Starveout	Severe: percs slowly, slope.	Severe: slope.	Severe: slope, too clayey.	Severe: slope.	Poor: too clayey, hard to pack, slope.
McDaniel	Severe: percs slowly.	Severe: slope.	Severe: large stones.	Moderate: slope.	Poor: small stones.
186 Roseberry	Severe: flooding, wetness.	Severe: seepage, flooding, wetness.	Severe: flooding, seepage, wetness.	Severe: flooding, seepage, wetness.	Fair: wetness, thin layer.
187*, 188*:					
Shellrock	Severe: poor filter, slope.	Severe: seepage, slope.	Severe: depth to rock, seepage, slope.	Severe: seepage, slope.	Poor: slope.
Rock outcrop.					
189, 190 Shoepeg	Severe: wetness.	Severe: seepage, wetness.	Severe: seepage, wetness.	Severe: wetness.	Fair: too clayey, wetness.
191*:					
Starveout	Severe: percs slowly, slope.	Severe: slope.	Severe: slope, too clayey.	Severe: slope.	Poor: too clayey, hard to pack, slope.
Gwin	Severe: depth to rock, slope.	Severe: depth to rock, slope, large stones.	Severe: depth to rock, slope, large stones.	Severe: depth to rock, slope.	Poor: depth to rock, small stones, slope.
McDaniel	Severe: percs slowly, slope.	Severe: slope.	Severe: slope, large stones.	Severe: slope.	Poor: small stones, slope.
192 Sudpeak	Severe: wetness, percs slowly.	Severe: slope, wetness.	Severe: too clayey.	Moderate: slope.	Poor: too clayey, hard to pack.
193 Swede	Severe: percs slowly.	Severe: slope.	Moderate: slope, too clayey.	Moderate: slope.	Fair: too clayey, slope.
194 Tamred	Severe: depth to rock, slope, large stones.	Severe: depth to rock, slope, large stones.	Severe: depth to rock, slope, large stones.	Severe: depth to rock, slope.	Poor: depth to rock, large stones, slope.
195 Ticanot	Severe: depth to rock, slope, large stones.	Severe: depth to rock, slope, large stones.	Severe: depth to rock, slope, too clayey.	Severe: depth to rock, slope.	Poor: depth to rock, too clayey, hard to pack.

See footnote at end of table.

Table 10.--Sanitary Facilities--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
196*, 197*:					
Tindahay	Severe: poor filter.	Severe: seepage.	Severe: too sandy.	Slight	Poor: seepage, too sandy.
Cashmere	Slight	Severe: seepage.	Slight	Slight	Good.
198*:					
Tindahay	Severe: poor filter.	Severe: seepage, slope.	Severe: too sandy.	Moderate: slope.	Poor: seepage, too sandy.
Cashmere	Moderate: slope.	Severe: seepage, slope.	Moderate: slope.	Moderate: slope.	Fair: slope.
199 Typic Xerofluvents	Severe: flooding, wetness, poor filter.	Severe: seepage, flooding, slope.	Severe: flooding, seepage, wetness.	Severe: flooding, seepage, wetness.	Poor: seepage, too sandy, small stones.
200*:					
Van Dusen	Severe: percs slowly, slope.	Severe: seepage, slope.	Severe: seepage, slope.	Severe: slope.	Poor: slope.
Haw	Severe: percs slowly, poor filter, slope.	Severe: seepage, slope.	Severe: slope.	Severe: slope.	Poor: slope.
201 Wapshilla	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Poor: small stones, slope.

* See description of the map unit for composition and behavior characteristics of the map unit.

Table 11.--Construction Materials

(Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "good," "fair," and other terms. Absence of an entry indicates that the component was not rated. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
1 Abo	Fair: low strength.	Improbable: excess fines.	Improbable: excess fines.	Good.
2 Agerdelly	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, slope.
3 Agerdelly	Poor: shrink-swell, low strength, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, slope.
4*: Agerdelly	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, slope.
Devnot	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, too clayey, small stones.
5*: Agerdelly	Poor: shrink-swell, low strength, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, slope.
Devnot	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, too clayey, small stones.
6, 7 Appledallia	Good	Improbable: small stones.	Probable	Poor: too clayey, small stones, area reclaim.
8 Appledallia	Fair: slope.	Improbable: small stones.	Probable	Poor: too clayey, small stones, area reclaim.
9*, 10*: Appledallia	Good	Improbable: small stones.	Probable	Poor: too clayey, small stones, area reclaim.
Appleshall	Fair: large stones.	Improbable: small stones.	Probable	Poor: cemented pan, too sandy, small stones.

See footnote at end of table.

Table 11.--Construction Materials--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
11*, 12*:				
Appledallia	Good	Improbable: small stones.	Probable	Poor: too clayey, small stones, area reclaim.
Odermott	Good	Probable	Probable	Poor: too clayey, small stones, area reclaim.
13*:				
Bakeoven	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, small stones, slope.
Reywat	Poor: depth to rock, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, small stones, slope.
14*:				
Bakeoven	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, small stones, slope.
Reywat	Poor: depth to rock, low strength, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, small stones, slope.
Rock outcrop.				
15, 16--Baldock	Fair: wetness.	Improbable: excess fines.	Improbable: excess fines.	Fair: small stones.
17, 18--Bissell	Good	Probable	Probable	Fair: too clayey.
19--Blackwell	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: too sandy, wetness.
20--Bluebell	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Poor: large stones, slope.
21--Bluebell	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: large stones, slope.
22--Bluesprin	Poor: depth to rock, slope.	Improbable: thin layer.	Improbable: thin layer.	Poor: small stones, slope.
23*:				
Brody	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.

See footnote at end of table.

Table 11.--Construction Materials--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
23*:				
Culdecole	Poor: low strength, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: area reclaim, small stones, slope.
24 Brownlee	Good	Improbable: excess fines.	Improbable: excess fines.	Fair: too clayey, small stones.
25 Brownlee	Good	Improbable: excess fines.	Improbable: excess fines.	Fair: too clayey, small stones, slope.
26 Brownlee	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: slope.
27 Brownlee	Good	Improbable: excess fines.	Improbable: excess fines.	Fair: too clayey, small stones.
28 Bryan	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
29 Cabarton	Poor: low strength, wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, wetness.
30, 31 Cashmere	Good	Improbable: excess fines.	Improbable: excess fines.	Fair: small stones.
32 Catherine	Fair: wetness.	Improbable: excess fines.	Improbable: excess fines.	Fair: area reclaim.
33*:				
Chilcott	Poor: cemented pan.	Probable	Probable	Poor: too clayey, area reclaim.
Vickery	Poor: cemented pan.	Probable	Improbable: too sandy.	Fair: cemented pan, area reclaim, thin layer.
34, 35 Clems	Good	Improbable: excess fines.	Improbable: excess fines.	Good.
36 Cranecreek	Poor: depth to rock, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: thin layer.
37*:				
Cranecreek	Poor: depth to rock, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: thin layer.
Reywat	Poor: depth to rock, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, small stones.

See footnote at end of table.

Table 11.--Construction Materials--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
38*:				
Culdecole	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: area reclaim, small stones, slope.
Brody	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
39--Dagor	Good	Improbable: excess fines.	Improbable: excess fines.	Good.
40--Demast	Fair: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim, slope.
41--Demast	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim, slope.
42, 43--Demasters	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim, slope.
44--Demoss	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, cemented pan.
45, 46--Deshler	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: thin layer.
47, 48, 49, 50--Deshler	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: thin layer, slope.
51*:				
Deshler	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: thin layer, slope.
Agerdelly	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, slope.
52*:				
Deshler	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: thin layer, slope.

See footnote at end of table.

Table 11.--Construction Materials--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
52*:				
Agerdelly	Poor: shrink-swell, low strength,	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, slope.
53*:				
Deshler	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: thin layer, slope.
Agerdelly	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, slope.
54*:				
Deshler	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: thin layer, slope.
Agerdelly	Poor: shrink-swell, low strength, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, slope.
55*:				
Deshler	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: thin layer.
Brownlee	Good	Improbable: excess fines.	Improbable: excess fines.	Fair: too clayey, small stones.
56*:				
Deshler	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: thin layer.
Brownlee	Good	Improbable: excess fines.	Improbable: excess fines.	Fair: too clayey, small stones, slope.
57*:				
Deshler	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: thin layer, slope.
Brownlee	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: slope.

See footnote at end of table.

Table 11.--Construction Materials--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
58*, 59*:				
Dashler	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: thin layer, slope.
Devnot	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, too clayey, small stones.
60 Deterson	Poor: shrink-swell, low strength, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: slope.
61 Deterson	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: slope.
62*:				
Dishner	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, too clayey, small stones.
Haw	Fair: slope.	Probable	Improbable: too sandy.	Poor: slope.
63 Donnel	Good	Probable	Improbable: too sandy.	Fair: small stones.
64. Duneland				
65, 66 Elijah	Poor: cemented pan.	Probable	Improbable: thin layer.	Poor: area reclaim.
67 Falk	Good	Probable	Probable	Poor: area reclaim.
68, 69, 70 Gem	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, small stones, slope.
71*:				
Gem	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, small stones, slope.
Bakeoven	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, small stones, slope.

See footnote at end of table.

Table 11.--Construction Materials--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
72*:				
Gem	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, small stones, slope.
Bakeoven	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, small stones, slope.
73*:				
Gem	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, small stones, slope.
Reywat	Poor: depth to rock, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, small stones, slope.
74*:				
Gem	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, small stones, slope.
Reywat	Poor: depth to rock, low strength, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, small stones, slope.
75, 76--Gestrin	Good	Probable	Improbable: too sandy.	Poor: area reclaim.
77, 78--Glasgow	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: thin layer.
79--Glasgow	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: thin layer, slope.
80*:				
Glasgow	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: thin layer, slope.
Lankbush	Fair: slope.	Probable	Improbable: too sandy.	Poor: slope.
81*:				
Glasgow	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: thin layer, slope.

See footnote at end of table.

Table 11.--Construction Materials--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
81*:				
Lankbush	Poor: slope.	Probable	Improbable: too sandy.	Poor: slope.
82, 83, 84 Greenleaf	Good	Improbable: excess fines.	Improbable: excess fines.	Good.
85 Greenleaf	Good	Improbable: excess fines.	Improbable: excess fines.	Fair: slope.
86, 87 Gross	Poor: depth to rock, low strength, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: large stones, slope.
88*, 89*:				
Gross	Poor: depth to rock, low strength, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: large stones, slope.
Bakeoven	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, small stones, slope.
90*:				
Gwin	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, small stones, slope.
Rock outcrop.				
91, 92 Harpt	Good	Improbable: excess fines.	Improbable: excess fines.	Good.
93 Haw	Good	Probable	Improbable: too sandy.	Fair: too clayey, small stones.
94 Haw	Good	Probable	Improbable: too sandy.	Fair: too clayey, small stones, slope.
95 Haw	Fair: slope.	Probable	Improbable: too sandy.	Poor: slope.
96 Haw	Poor: slope.	Probable	Improbable: too sandy.	Poor: slope.
97, 98, 99 Jacknife	Fair: shrink-swell.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, large stones, area reclaim.
100 Jacknife	Fair: shrink-swell, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, large stones, area reclaim.

See footnote at end of table.

Table 11.--Construction Materials--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
101---------- Jacknife	Fair: shrink-swell, large stones, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, large stones, area reclaim.
102---------- Jenny	Poor: low strength, shrink-swell.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
103---------- Johnson	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
104---------- Jughandle	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: slope.
105*:				
Jughandle----------	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: slope.
Suttler----------	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim, slope.
106---------- Kangas	Good----------	Probable----------	Probable----------	Poor: small stones, area reclaim.
107---------- Klicker	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
108---------- Klickson	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim, slope.
109*:				
Klickson----------	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim, slope.
Rock outcrop.				
110, 111---------- Langrell	Fair: large stones.	Probable----------	Probable----------	Poor: small stones, area reclaim.
112, 113---------- Lankbush	Good----------	Probable----------	Improbable: too sandy.	Fair: too clayey, small stones.
114---------- Lankbush	Good----------	Probable----------	Improbable: too sandy.	Fair: too clayey, small stones, slope.
115---------- Lankbush	Fair: slope.	Probable----------	Improbable: too sandy.	Poor: slope.

See footnote at end of table.

Table 11.--Construction Materials--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
116---------- Lanktree	Good----------	Probable----------	Improbable: too sandy.	Poor: thin layer.
117---------- Lanktree	Fair: slope.	Probable----------	Improbable: too sandy.	Poor: thin layer, slope.
118---------- Lanktree	Good----------	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
119---------- Lanktree	Fair: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, small stones, slope.
120*:				
Lanktree----------	Poor: slope.	Probable----------	Improbable: too sandy.	Poor: thin layer, slope.
Lankbush----------	Poor: slope.	Probable----------	Improbable: too sandy.	Poor: slope.
121---------- Ligget	Fair: depth to rock, thin layer, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: slope.
122---------- Ligget	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: slope.
123---------- Lolalita	Good----------	Improbable: excess fines.	Improbable: excess fines.	Fair: small stones.
124---------- Lolalita	Good----------	Improbable: excess fines.	Improbable: excess fines.	Fair: small stones, slope.
125---------- Lolalita	Fair: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: slope.
126*:				
Lolalita----------	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: slope.
Glasgow----------	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: thin layer, slope.
127*:				
Lolalita----------	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: slope.
Saralegui----------	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: slope.

See footnote at end of table.

Table 11.--Construction Materials--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
128*, 129*:				
Lorella	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, small stones, slope.
Rock outcrop.				
130				
McDaniel	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim, slope.
131*:				
McDaniel	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim, slope.
Rockly	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, small stones, slope.
132*:				
McDaniel	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim, slope.
Starveout	Poor: shrink-swell, low strength, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, slope.
133				
Meland	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Fair: depth to rock, small stones.
134				
Meland	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Fair: depth to rock, small stones, slope.
135				
Meland	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Poor: slope.
136				
Meland	Poor: depth to rock, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
137*:				
Meland	Poor: depth to rock, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
Riggins	Poor: depth to rock, large stones.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Poor: depth to rock, large stones, slope.

See footnote at end of table.

Table 11.--Construction Materials--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
138*:				
Meland	Poor: depth to rock, low strength, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
Riggins	Poor: depth to rock, large stones, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Poor: depth to rock, large stones, slope.
139 Melton	Fair: wetness.	Probable	Improbable: too sandy.	Poor: area reclaim.
140*:				
Melton	Fair: wetness.	Probable	Improbable: too sandy.	Poor: area reclaim.
Roseberry	Fair: wetness.	Improbable: excess fines.	Improbable: excess fines.	Fair: small stones.
141, 142, 143, 144 Midvale	Good	Improbable: excess fines.	Improbable: excess fines.	Poor: thin layer.
145 Midvale	Fair: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: thin layer, slope.
146*:				
Midvale	Good	Improbable: excess fines.	Improbable: excess fines.	Poor: thin layer.
Demoss	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, cemented pan.
147*:				
Molly	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim, slope.
Littlesalmon	Poor: slope.	Improbable: large stones.	Improbable: large stones.	Poor: area reclaim, small stones, slope.
148*:				
Molly	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim, slope.
Littlesalmon	Poor: slope.	Improbable: large stones.	Improbable: large stones.	Poor: area reclaim, small stones, slope.
Rock outcrop.				

See footnote at end of table.

Table 11.--Construction Materials--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
149--- Moonstone	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: slope.
150, 151--- Moulton	Fair: wetness.	Probable---	Probable---	Poor: small stones, area reclaim.
152*:				
Moulton---	Fair: wetness.	Probable---	Probable---	Poor: small stones, area reclaim.
Falk---	Good---	Probable---	Probable---	Poor: area reclaim.
153*:				
Mulett---	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, small stones, slope.
Mackey---	Poor: depth to rock, slope.	Improbable: thin layer.	Improbable: thin layer.	Poor: small stones, slope.
154*:				
Nazaton---	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim, slope.
Naz---	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: slope.
155, 156, 157--- Newell	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Fair: too clayey.
158--- Newell	Fair: low strength.	Improbable: excess fines.	Improbable: excess fines.	Fair: too clayey, large stones.
159--- Notus	Good---	Probable---	Probable---	Poor: too sandy, small stones, area reclaim.
160--- Nyssaton	Fair: low strength.	Improbable: excess fines.	Improbable: excess fines.	Good.
161*:				
Odermott---	Fair: slope.	Probable---	Probable---	Poor: too clayey, small stones, area reclaim.
Appledellia---	Fair: slope.	Improbable: small stones.	Probable---	Poor: too clayey, small stones, area reclaim.

See footnote at end of table.

Table 11.--Construction Materials--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
162--Oldsferry	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
163--Onyx	Good	Improbable: excess fines.	Improbable: excess fines.	Good.
164, 165, 166--Owyhee	Good	Improbable: excess fines.	Improbable: excess fines.	Good.
167--Owyhee	Good	Improbable: excess fines.	Improbable: excess fines.	Fair: slope.
168--Owyhee	Fair: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: slope.
169--Paniogue	Good	Probable	Probable	Poor: small stones, area reclaim.
170--Payette	Fair: slope.	Probable	Improbable: too sandy.	Poor: small stones, slope.
171--Payette	Poor: slope.	Probable	Improbable: too sandy.	Poor: small stones, slope.
172*:				
Payette	Poor: slope.	Probable	Improbable: too sandy.	Poor: small stones, slope.
Van Dusen	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
173*, 174*, 175*:				
Power	Good	Improbable: excess fines.	Improbable: excess fines.	Fair: too clayey.
Purdam	Good	Improbable: excess fines.	Improbable: excess fines.	Poor: area reclaim.
176--Riggins	Poor: depth to rock, large stones.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Poor: depth to rock, large stones, slope.
177, 178--Riggins	Poor: depth to rock, large stones, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Poor: depth to rock, large stones, slope.
179. Riverwash				
180*: Rock outcrop.				

See footnote at end of table.

Table 11.--Construction Materials--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
180*:				
Bakeoven	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, small stones, slope.
181 Rockly	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, small stones, slope.
182*:				
Rockly	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, small stones, slope.
Riggins	Poor: depth to rock, large stones.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Poor: depth to rock, large stones, slope.
183*:				
Rockly	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, small stones, slope.
Riggins	Poor: depth to rock, large stones, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Poor: depth to rock, large stones, slope.
184*:				
Rockly	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, small stones, slope.
Rock outcrop.				
185*:				
Rockly	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, small stones, slope.
Starveout	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, slope.
McDaniel	Fair: shrink-swell, large stones.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim.
186 Roseberry	Fair: wetness.	Improbable: excess fines.	Improbable: excess fines.	Fair: small stones.

See footnote at end of table.

Table 11.--Construction Materials--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
187*:				
Shellrock	Fair: depth to rock, thin layer, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: slope.
Rock outcrop.				
188*:				
Shellrock	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: slope.
Rock outcrop.				
189, 190--- Shoepeg	Fair: wetness.	Probable	Probable	Fair: area reclaim.
191*:				
Starveout	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, slope.
Gwin	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, small stones, slope.
McDaniel	Fair: shrink-swell, large stones, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim, slope.
192--- Sudpeak	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
193--- Swade	Fair: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Fair: too clayey, slope.
194--- Tamrad	Poor: depth to rock, large stones, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Poor: large stones, slope.
195--- Ticanot	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Poor: depth to rock, too clayey, large stones.
196*, 197*:				
Tindahay	Good	Probable	Improbable: too sandy.	Poor: too sandy, small stones.
Cashmere	Good	Improbable: excess fines.	Improbable: excess fines.	Fair: small stones.
198*:				
Tindahay	Good	Probable	Improbable: too sandy.	Poor: too sandy, small stones.

See footnote at end of table.

Table 11.--Construction Materials--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
198*:				
Cashmere	Good	Improbable: excess fines.	Improbable: excess fines.	Fair: small stones, slope.
199 Typic Xerofluvents	Poor: large stones.	Improbable: large stones.	Improbable: large stones.	Poor: too sandy, small stones, area reclaim.
200*:				
Van Dusen	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
Haw	Poor: slope.	Probable	Improbable: too sandy.	Poor: slope.
201 Wapshilla	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim, slope.

* See description of the map unit for composition and behavior characteristics of the map unit.

Table 12.--Water Management

(Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "moderate," and "severe." Absence of an entry indicates that the component was not evaluated. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Soil name and map symbol	Limitations for--		Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Drainage	Irrigation	Terraces and diversions	Grassed waterways
1---------- Abo	Slight---------	Severe: piping.	Deep to water	Erodes easily	Erodes easily	Too arid, erodes easily.
2, 3---------- Agerdelly	Severe: slope.	Severe: hard to pack.	Deep to water	Slope, slow intake, percs slowly.	Slope, percs slowly.	Slope, percs slowly.
4*, 5*: Agerdelly-------- Devnot----------	Severe: slope. Severe: depth to rock, slope.	Severe: hard to pack. Severe: hard to pack.	Deep to water Deep to water	Slope, slow intake, percs slowly. Slope, percs slowly, depth to rock.	Slope, percs slowly. Slope, depth to rock, percs slowly.	Slope, percs slowly. Slope, depth to rock, percs slowly.
6, 7---------- Appledellia	Severe: seepage.	Severe: seepage.	Deep to water	Slope, percs slowly, cemented pan.	Cemented pan, erodes easily.	Erodes easily, cemented pan.
8---------- Appledellia	Severe: seepage, slope.	Severe: seepage.	Deep to water	Slope, percs slowly, cemented pan.	Slope, cemented pan, erodes easily.	Slope, erodes easily, cemented pan.
9*, 10*: Appledellia------ Appleshall------- 11*, 12*: Appledellia------	Severe: seepage, slope. Severe: seepage, cemented pan. Severe: seepage.	Severe: seepage. Severe: seepage. Severe: seepage.	Deep to water Deep to water Deep to water	Slope, percs slowly, cemented pan. Slope, large stones, percs slowly. Slope, percs slowly, cemented pan.	Slope, cemented pan, erodes easily. Large stones, cemented pan. Cemented pan, erodes easily.	Slope, erodes easily, cemented pan. Large stones, cemented pan. Erodes easily, cemented pan.
Odarmott----------	Severe: seepage.	Severe: seepage.	Deep to water	Slope----------	Too sandy------	Favorable.
13*: Bakeoven--------- Reywat-----------	Severe: depth to rock, slope. Severe: depth to rock, slope.	Severe: large stones. Moderate: large stones.	Deep to water Deep to water	Slope, large stones, droughty. Slope, large stones, droughty.	Slope, large stones, depth to rock. Slope, large stones, depth to rock.	Large stones, slope, droughty. Large stones, slope, droughty.
14*: Bakeoven----------	Severe: depth to rock, slope.	Severe: large stones.	Deep to water	Slope, large stones, droughty.	Slope, large stones, depth to rock.	Large stones, slope, droughty.

See footnote at end of table.

Table 12.--Water Management--Continued

Soil name and map symbol	Limitations for--		Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Drainage	Irrigation	Terraces and diversions	Grassed waterways
14*:						
Reywat	Severe: depth to rock, slope.	Moderate: large stones.	Deep to water	Slope, large stones, droughty.	Slope, large stones, depth to rock.	Large stones, slope, droughty.
Rock outcrop.						
15--- Baldock	Severe: seepage.	Severe: piping.	Frost action	Wetness	Wetness	Favorable.
16--- Baldock	Severe: seepage.	Severe: piping.	Frost action	Wetness, erodes easily.	Erodes easily, wetness.	Erodes easily.
17--- Bissell	Moderate: seepage.	Moderate: thin layer, piping.	Deep to water	Favorable	Favorable	Too arid.
18--- Bissell	Moderate: seepage, slope.	Moderate: thin layer, piping.	Deep to water	Slope	Favorable	Too arid.
19--- Blackwell	Slight	Severe: piping, wetness.	Flooding, frost action.	Wetness	Wetness, too sandy.	Wetness.
20, 21--- Bluebell	Severe: slope.	Severe: piping, large stones.	Deep to water	Slope, large stones, droughty.	Slope, large stones, depth to rock.	Large stones, slope, droughty.
22--- Bluesprin	Severe: slope.	Severe: seepage.	Deep to water	Slope, droughty, depth to rock.	Slope, large stones, depth to rock.	Large stones, slope, droughty.
23*:						
Brody	Severe: slope.	Severe: thin layer.	Deep to water	Slope, depth to rock.	Slope, large stones, depth to rock.	Large stones, slope, erodes easily.
Culdecole	Severe: slope.	Moderate: thin layer, piping, large stones.	Deep to water	Slope, erodes easily.	Slope, large stones, erodes easily.	Large stones, slope, erodes easily.
24--- Brownlee	Moderate: seepage, slope.	Moderate: thin layer, piping.	Deep to water	Slope, soil blowing, erodes easily.	Erodes easily, soil blowing.	Erodes easily.
25, 26--- Brownlee	Severe: slope.	Moderate: thin layer, piping.	Deep to water	Slope, soil blowing, erodes easily.	Slope, erodes easily, soil blowing.	Slope, erodes easily.
27--- Brownlee	Moderate: seepage.	Moderate: thin layer, piping.	Deep to water	Erodes easily	Erodes easily	Erodes easily.
28--- Bryan	Severe: seepage, slope.	Severe: seepage.	Deep to water	Slope, droughty, soil blowing.	Slope, too sandy, soil blowing.	Slope, droughty, rooting depth.

See footnote at end of table.

Table 12.--Water Management--Continued

Soil name and map symbol	Limitations for--		Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Drainage	Irrigation	Terraces and diversions	Grassed waterways
29---------- Cabarton	Slight---------	Severe: wetness.	Percs slowly, flooding, frost action.	Wetness, percs slowly.	Erodes easily, wetness, percs slowly.	Wetness, erodes easily, percs slowly.
30, 31---------- Cashmere	Severe: seepage.	Severe: piping.	Deep to water	Slope, soil blowing.	Erodes easily, soil blowing.	Too arid, erodes easily.
32---------- Catharine	Moderate: seepage.	Severe: piping, wetness.	Flooding, frost action.	Wetness, flooding.	Erodes easily, wetness.	Erodes easily.
33*:						
Chilcott---------	Severe: seepage, slope.	Severe: thin layer.	Deep to water	Slope, percs slowly, cemented pan.	Slope, cemented pan, erodes easily.	Too arid, slope, erodes easily.
Vickery----------	Severe: seepage, slope.	Severe: seepage, piping.	Deep to water	Slope, cemented pan, erodes easily.	Slope, cemented pan, erodes easily.	Too arid, slope, erodes easily.
34---------- Clems	Severe: seepage.	Severe: piping.	Deep to water	Soil blowing---	Soil blowing---	Too arid.
35---------- Clems	Severe: seepage.	Severe: piping.	Deep to water	Slope, soil blowing.	Soil blowing---	Too arid.
36---------- Cranecreek	Severe: slope.	Severe: thin layer.	Deep to water	Slope, percs slowly, depth to rock.	Slope, depth to rock, erodes easily.	Slope, erodes easily, depth to rock.
37*:						
Cranecreek-------	Severe: slope.	Severe: thin layer.	Deep to water	Slope, percs slowly, depth to rock.	Slope, depth to rock, erodes easily.	Slope, erodes easily, depth to rock.
Reywat----------	Severe: depth to rock.	Moderate: large stones.	Deep to water	Slope, large stones, droughty.	Large stones, depth to rock.	Large stones, droughty.
38*:						
Culdecole--------	Severe: slope.	Moderate: thin layer, piping, large stones.	Deep to water	Slope, erodes easily.	Slope, large stones, erodes easily.	Large stones, slope, erodes easily.
Brody----------	Severe: slope.	Severe: thin layer.	Deep to water	Slope, depth to rock.	Slope, large stones, depth to rock.	Large stones, slope, erodes easily.
39---------- Dagor	Moderate: seepage, slope.	Severe: piping.	Deep to water	Slope----------	Erodes easily	Erodes easily.
40, 41---------- Damast	Severe: slope.	Moderate: thin layer.	Deep to water	Slope----------	Slope----------	Slope.
42, 43---------- Damasters	Severe: slope.	Severe: thin layer.	Deep to water	Slope----------	Slope----------	Slope.

See footnote at end of table.

Table 12.--Water Management--Continued

Soil name and map symbol	Limitations for--		Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Drainage	Irrigation	Terraces and diversions	Grassed waterways
44---------- Demoss	Severe: depth to rock, cemented pan.	Severe: thin layer.	Deep to water	Slope, percs slowly, depth to rock.	Depth to rock, cemented pan, percs slowly.	Depth to rock, cemented pan, percs slowly.
45---------- Deshler	Moderate: depth to rock, slope.	Severe: thin layer.	Deep to water	Slope, percs slowly, depth to rock.	Depth to rock	Depth to rock.
46, 47, 48--------- Deshler	Severe: slope.	Severe: thin layer.	Deep to water	Slope, percs slowly, depth to rock.	Slope, depth to rock.	Slope, depth to rock.
49, 50---------- Deshler	Severe: slope.	Moderate: thin layer, hard to pack, large stones.	Deep to water	Slope, percs slowly, depth to rock.	Slope, large stones, depth to rock.	Large stones, slope, depth to rock.
51*, 52*:						
Deshler----------	Severe: slope.	Severe: thin layer.	Deep to water	Slope, percs slowly, depth to rock.	Slope, depth to rock.	Slope, depth to rock.
Agerdelly--------	Severe: slope.	Severe: hard to pack.	Deep to water	Slope, slow intake, percs slowly.	Slope, percs slowly.	Slope, percs slowly.
53*, 54*:						
Deshler----------	Severe: slope.	Moderate: thin layer, hard to pack, large stones.	Deep to water	Slope, percs slowly, depth to rock.	Slope, large stones, depth to rock.	Large stones, slope, depth to rock.
Agerdelly--------	Severe: slope.	Severe: hard to pack.	Deep to water	Slope, slow intake, percs slowly.	Slope, percs slowly.	Slope, percs slowly.
55*:						
Deshler----------	Moderate: depth to rock, slope.	Severe: thin layer.	Deep to water	Slope, percs slowly, depth to rock.	Depth to rock, erodes easily.	Erodes easily, depth to rock.
Brownlee---------	Moderate: seepage, slope.	Moderate: thin layer, piping.	Deep to water	Slope, soil blowing, erodes easily.	Erodes easily, soil blowing.	Erodes easily.
56*, 57*:						
Deshler----------	Severe: slope.	Severe: thin layer.	Deep to water	Slope, percs slowly, depth to rock.	Slope, depth to rock, erodes easily.	Slope, erodes easily, depth to rock.
Brownlee---------	Severe: slope.	Moderate: thin layer, piping.	Deep to water	Slope, soil blowing, erodes easily.	Slope, erodes easily, soil blowing.	Slope, erodes easily.
58*, 59*:						
Deshler----------	Severe: slope.	Severe: thin layer.	Deep to water	Slope, percs slowly, depth to rock.	Slope, depth to rock.	Slope, depth to rock.

See footnote at end of table.

Table 12.--Water Management--Continued

Soil name and map symbol	Limitations for--		Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Drainage	Irrigation	Terraces and diversions	Grassed waterways
58*, 59*: Devnot	Severe: depth to rock, slope.	Severe: hard to pack.	Deep to water	Slope, percs slowly, depth to rock.	Slope, depth to rock, percs slowly.	Slope, depth to rock, percs slowly.
60, 61--- Deterson	Severe: slope.	Moderate: hard to pack.	Deep to water	Slope, percs slowly.	Slope, erodes easily, percs slowly.	Slope, erodes easily, percs slowly.
62*: Dishner	Severe: depth to rock, slope.	Severe: hard to pack.	Deep to water	Slope, large stones, percs slowly.	Slope, large stones, depth to rock.	Too arid, large stones, slope.
Haw	Severe: seepage, slope.	Severe: piping.	Deep to water	Slope---	Slope, erodes easily.	Too arid, slope, erodes easily.
63--- Donnel	Severe: seepage.	Severe: piping.	Deep to water	Favorable---	Favorable---	Favorable.
64. Duneland						
65--- Elijah	Severe: seepage.	Severe: seepage.	Deep to water	Slope, cemented pan, erodes easily.	Cemented pan, erodes easily.	Too arid, erodes easily.
66--- Elijah	Severe: seepage, slope.	Severe: seepage.	Deep to water	Slope, cemented pan, erodes easily.	Slope, cemented pan, erodes easily.	Too arid, slope, erodes easily.
67--- Falk	Severe: seepage.	Severe: piping.	Deep to water	Rooting depth	Favorable---	Rooting depth.
68, 69, 70--- Gam	Severe: slope.	Severe: hard to pack.	Deep to water	Slope, percs slowly, depth to rock.	Slope, depth to rock, percs slowly.	Slope, depth to rock, percs slowly.
71*, 72*: Gam	Severe: slope.	Severe: hard to pack.	Deep to water	Slope, percs slowly, depth to rock.	Slope, depth to rock, percs slowly.	Slope, depth to rock, percs slowly.
Bakeoven	Severe: depth to rock, slope.	Severe: large stones.	Deep to water	Slope, large stones, droughty.	Slope, large stones, depth to rock.	Large stones, slope, droughty.
73*, 74*: Gam	Severe: slope.	Severe: hard to pack.	Deep to water	Slope, percs slowly, depth to rock.	Slope, depth to rock, percs slowly.	Slope, depth to rock, percs slowly.
Reywat	Severe: depth to rock, slope.	Moderate: large stones.	Deep to water	Slope, large stones, droughty.	Slope, large stones, depth to rock.	Large stones, slope, droughty.
75, 76--- Gestrin	Severe: seepage.	Severe: thin layer.	Deep to water	Slope---	Favorable---	Favorable.

See footnote at end of table.

Table 12.--Water Management--Continued

Soil name and map symbol	Limitations for--		Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Drainage	Irrigation	Terraces and diversions	Grassed waterways
77---------- Glasgow	Moderate: depth to rock, slope.	Severe: thin layer.	Deep to water	Slope, percs slowly, depth to rock.	Depth to rock, erodes easily.	Too arid, erodes easily.
78, 79---------- Glasgow	Severe: slope.	Severe: thin layer.	Deep to water	Slope, percs slowly, depth to rock.	Slope, depth to rock, erodes easily.	Too arid, slope, erodes easily.
80*, 81*:						
Glasgow----------	Severe: slope.	Severe: thin layer.	Deep to water	Slope, percs slowly, depth to rock.	Slope, depth to rock, erodes easily.	Too arid, slope, erodes easily.
Lankbush---------	Severe: seepage, slope.	Severe: piping.	Deep to water	Slope----------	Slope, erodes easily, soil blowing.	Too arid, slope, erodes easily.
82---------- Greenleaf	Slight---------	Severe: piping.	Deep to water	Erodes easily	Erodes easily	Too arid, erodes easily.
83, 84---------- Greenleaf	Moderate: slope.	Severe: piping.	Deep to water	Slope, erodes easily.	Erodes easily	Too arid, erodes easily.
85---------- Greenleaf	Severe: slope.	Severe: piping.	Deep to water	Slope, erodes easily.	Slope, erodes easily.	Too arid, slope, erodes easily.
86, 87---------- Gross	Severe: slope.	Severe: thin layer.	Deep to water	Slope, depth to rock.	Slope, large stones, depth to rock.	Large stones, slope, depth to rock.
88*, 89*:						
Gross----------	Severe: slope.	Severe: thin layer.	Deep to water	Slope, depth to rock.	Slope, large stones, depth to rock.	Large stones, slope, depth to rock.
Bakeoven---------	Severe: depth to rock, slope.	Severe: large stones.	Deep to water	Slope, large stones, droughty.	Slope, large stones, depth to rock.	Large stones, slope, droughty.
90*:						
Gwin----------	Severe: depth to rock, slope.	Severe: large stones.	Deep to water	Slope, large stones, droughty.	Slope, large stones, depth to rock.	Large stones, slope, droughty.
Rock outcrop.						
91, 92---------- Harpt	Severe: seepage.	Severe: piping.	Deep to water	Slope----------	Erodes easily	Too arid, erodes easily.
93---------- Haw	Severe: seepage.	Severe: piping.	Deep to water	Slope----------	Erodes easily	Too arid, erodes easily.
94, 95, 96-------- Haw	Severe: seepage, slope.	Severe: piping.	Deep to water	Slope----------	Slope, erodes easily.	Too arid, slope, erodes easily.
97---------- Jacknife	Slight---------	Moderate: hard to pack, large stones.	Deep to water	Percs slowly---	Large stones, percs slowly.	Large stones, percs slowly.

See footnote at end of table.

Table 12.--Water Management--Continued

Soil name and map symbol	Limitations for--		Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Drainage	Irrigation	Terraces and diversions	Grassed waterways
98---------- Jacknife	Moderate: slope.	Moderate: hard to pack, large stones.	Deep to water	Slope, percs slowly.	Large stones, percs slowly.	Large stones, percs slowly.
99, 100---------- Jacknife	Severe: slope.	Moderate: hard to pack, large stones.	Deep to water	Slope, percs slowly.	Slope, large stones, percs slowly.	Large stones, slope, percs slowly.
101---------- Jacknife	Severe: slope.	Moderate: hard to pack, large stones.	Deep to water	Slope, large stones.	Slope, large stones, percs slowly.	Large stones, slope.
102---------- Jenny	Slight---------	Moderate: hard to pack.	Deep to water	Slow intake, percs slowly.	Percs slowly---	Percs slowly.
103---------- Johnson	Severe: slope.	Severe: piping.	Deep to water	Slope, soil blowing.	Slope, soil blowing.	Slope.
104---------- Jughandle	Severe: seepage, slope.	Severe: seepage.	Deep to water	Slope, droughty, soil blowing.	Slope, too sandy.	Slope.
105*:						
Jughandle--------	Severe: seepage, slope.	Severe: seepage.	Deep to water	Slope, droughty, soil blowing.	Slope, too sandy.	Slope.
Suttler----------	Severe: slope.	Severe: piping.	Deep to water	Slope----------	Slope, erodes easily.	Slope, erodes easily.
106---------- Kangas	Severe: seepage.	Severe: seepage.	Deep to water	Droughty-------	Too sandy, soil blowing.	Droughty.
107---------- Klicker	Severe: slope.	Severe: thin layer.	Deep to water	Slope, large stones, depth to rock.	Slope, large stones, depth to rock.	Large stones, slope, depth to rock.
108---------- Klickson	Severe: slope.	Moderate: large stones.	Deep to water	Slope, large stones, percs slowly.	Slope, large stones, erodes easily.	Large stones, slope, erodes easily.
109*:						
Klickson---------	Severe: slope.	Moderate: large stones.	Deep to water	Slope, large stones, percs slowly.	Slope, large stones, erodes easily.	Large stones, slope, erodes easily.
Rock outcrop.						
110---------- Langrell	Severe: seepage.	Severe: seepage, large stones.	Deep to water	Large stones, droughty.	Large stones---	Large stones, droughty.
111---------- Langrell	Moderate: seepage.	Severe: seepage, large stones.	Deep to water	Large stones, droughty.	Large stones---	Large stones, droughty.
112, 113---------- Lankbush	Severe: seepage.	Severe: piping.	Deep to water	Slope----------	Erodes easily, soil blowing.	Too arid, erodes easily.

See footnote at end of table.

Table 12.--Water Management--Continued

Soil name and map symbol	Limitations for--		Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Drainage	Irrigation	Terraces and diversions	Grassed waterways
114, 115---------- Lankbush	Severe: seepage, slope.	Severe: piping.	Deep to water	Slope----------	Slope, erodes easily, soil blowing.	Too arid, slope, erodes easily.
116---------- Lanktree	Moderate: seepage.	Severe: piping.	Deep to water	Percs slowly---	Erodes easily	Too arid, erodes easily.
117---------- Lanktree	Severe: slope.	Severe: piping.	Deep to water	Slope, percs slowly.	Slope, erodes easily.	Too arid, slope, erodes easily.
118---------- Lanktree	Moderate: seepage, slope.	Moderate: thin layer.	Deep to water	Slope, percs slowly.	Percs slowly---	Too arid, percs slowly.
119---------- Lanktree	Severe: slope.	Moderate: thin layer.	Deep to water	Slope, percs slowly.	Slope, erodes easily, percs slowly.	Too arid, slope, erodes easily.
120*:						
Lanktree---------	Severe: slope.	Severe: piping.	Deep to water	Slope, percs slowly.	Slope, erodes easily.	Too arid, slope, erodes easily.
Lankbush---------	Severe: seepage, slope.	Severe: piping.	Deep to water	Slope----------	Slope, erodes easily, soil blowing.	Too arid, slope, erodes easily.
121, 122---------- Ligget	Severe: seepage, slope.	Severe: piping.	Deep to water	Slope, droughty, soil blowing.	Slope, too sandy, soil blowing.	Slope, droughty.
123---------- Lolalita	Severe: seepage.	Severe: piping.	Deep to water	Slope, droughty.	Soil blowing---	Too arid, droughty.
124, 125---------- Lolalita	Severe: seepage, slope.	Severe: piping.	Deep to water	Slope, droughty.	Slope, soil blowing.	Too arid, slope, droughty.
126*:						
Lolalita---------	Severe: seepage, slope.	Severe: piping.	Deep to water	Slope, droughty.	Slope, soil blowing.	Too arid, slope, droughty.
Glasgow----------	Severe: slope.	Severe: thin layer.	Deep to water	Slope, percs slowly, depth to rock.	Slope, depth to rock, erodes easily.	Too arid, slope, erodes easily.
127*:						
Lolalita---------	Severe: seepage, slope.	Severe: piping.	Deep to water	Slope, droughty.	Slope, soil blowing.	Too arid, slope, droughty.
Saralegui--------	Severe: seepage, slope.	Severe: piping.	Deep to water	Slope, soil blowing.	Slope, soil blowing.	Too arid, slope, rooting depth.
128*, 129*:						
Lorella----------	Severe: depth to rock, slope.	Severe: thin layer.	Deep to water	Slope, droughty, percs slowly.	Slope, large stones, depth to rock.	Large stones, slope, droughty.

See footnote at end of table.

Table 12.--Water Management--Continued

Soil name and map symbol	Limitations for--		Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Drainage	Irrigation	Terraces and diversions	Grassed waterways
128*, 129*: Rock outcrop.						
130--McDaniel	Severe: slope.	Moderate: large stones.	Deep to water	Slope, large stones, droughty.	Slope, large stones.	Large stones, slope, droughty.
131*:						
McDaniel	Severe: slope.	Moderate: large stones.	Deep to water	Slope, large stones, droughty.	Slope, large stones.	Large stones, slope, droughty.
Rockly	Severe: depth to rock, slope.	Severe: thin layer.	Deep to water	Slope, droughty, depth to rock.	Slope, large stones, depth to rock.	Large stones, slope, droughty.
132*:						
McDaniel	Severe: slope.	Moderate: large stones.	Deep to water	Slope, large stones, droughty.	Slope, large stones.	Large stones, slope, droughty.
Starveout	Severe: slope.	Moderate: hard to pack.	Deep to water	Slope	Slope	Slope.
133--Meland	Moderate: seepage, depth to rock, slope.	Moderate: thin layer, piping.	Deep to water	Depth to rock, slope, erodes easily.	Depth to rock, erodes easily.	Erodes easily, depth to rock.
134, 135--Meland	Severe: slope.	Moderate: thin layer, piping.	Deep to water	Depth to rock, slope, erodes easily.	Slope, depth to rock, erodes easily.	Slope, erodes easily, depth to rock.
136--Meland	Severe: slope.	Severe: thin layer.	Deep to water	Slope, large stones, depth to rock.	Slope, large stones, depth to rock.	Large stones, slope, depth to rock.
137*, 138*:						
Meland	Severe: slope.	Severe: thin layer.	Deep to water	Slope, depth to rock.	Slope, large stones, depth to rock.	Large stones, slope, depth to rock.
Riggins	Severe: depth to rock, slope.	Severe: large stones.	Deep to water	Slope, large stones, droughty.	Slope, large stones, depth to rock.	Large stones, slope, droughty.
139--Melton	Severe: seepage.	Severe: seepage, wetness.	Flooding, large stones, frost action.	Wetness, rooting depth, flooding.	Wetness, too sandy.	Wetness, rooting depth.
140*:						
Melton	Severe: seepage.	Severe: seepage, wetness.	Flooding, large stones, frost action.	Wetness, rooting depth, flooding.	Wetness, too sandy.	Wetness, rooting depth.
Roseberry	Severe: seepage.	Severe: piping, wetness.	Flooding, frost action.	Wetness, droughty, flooding.	Wetness	Droughty.
141--Midvale	Slight	Severe: piping.	Deep to water	Percs slowly	Erodes easily, percs slowly.	Erodes easily, percs slowly.

See footnote at end of table.

Table 12.--Water Management--Continued

Soil name and map symbol	Limitations for--		Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Drainage	Irrigation	Terraces and diversions	Grassed waterways
142, 143---------- Midvale	Moderate: slope.	Severe: piping.	Deep to water	Percs slowly, slope.	Erodes easily, percs slowly.	Erodes easily, percs slowly.
144, 145---------- Midvale	Severe: slope.	Severe: piping.	Deep to water	Percs slowly, slope.	Slope, erodes easily, percs slowly.	Slope, erodes easily, percs slowly.
146*:						
Midvale----------	Moderate: slope.	Severe: piping.	Deep to water	Percs slowly, slope.	Erodes easily, percs slowly.	Erodes easily, percs slowly.
Demoss----------	Severe: depth to rock, cemented pan.	Severe: thin layer.	Deep to water	Slope, percs slowly, depth to rock.	Depth to rock, cemented pan, percs slowly.	Depth to rock, cemented pan, percs slowly.
147*:						
Molly----------	Severe: seepage, slope.	Severe: seepage.	Deep to water	Slope, droughty, erodes easily.	Slope, erodes easily.	Slope, erodes easily, droughty.
Littlesalmon-----	Severe: seepage, slope.	Severe: seepage, large stones.	Deep to water	Slope, large stones, droughty.	Slope, large stones, too sandy.	Large stones, slope, droughty.
148*:						
Molly----------	Severe: seepage, slope.	Severe: seepage.	Deep to water	Slope, droughty, erodes easily.	Slope, erodes easily.	Slope, erodes easily, droughty.
Littlesalmon-----	Severe: seepage, slope.	Severe: seepage, large stones.	Deep to water	Slope, large stones, droughty.	Slope, large stones, too sandy.	Large stones, slope, droughty.
Rock outcrop.						
149---------- Moonstone	Severe: seepage, slope.	Severe: piping.	Deep to water	Slope, droughty, soil blowing.	Slope, depth to rock, soil blowing.	Slope, droughty, depth to rock.
150---------- Moulton	Severe: seepage.	Severe: seepage, wetness.	Frost action, cutbanks cave.	Wetness, droughty.	Wetness, too sandy.	Droughty.
151---------- Moulton	Severe: seepage.	Severe: seepage, wetness.	Frost action, cutbanks cave.	Wetness, droughty.	Erodes easily, wetness, too sandy.	Erodes easily, droughty.
152*:						
Moulton----------	Severe: seepage.	Severe: seepage, wetness.	Frost action, cutbanks cave.	Wetness, droughty.	Wetness, too sandy.	Droughty.
Falk----------	Severe: seepage.	Severe: piping.	Deep to water	Rooting depth	Favorable------	Rooting depth.
153*:						
Mulett----------	Severe: depth to rock, slope.	Severe: large stones.	Deep to water	Slope, large stones, droughty.	Slope, large stones, depth to rock.	Too arid, large stones, slope.

See footnote at end of table.

Table 12.--Water Management--Continued

Soil name and map symbol	Limitations for--		Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Drainage	Irrigation	Terraces and diversions	Grassed waterways
153*:						
Mackay	Severe: seepage, slope.	Severe: seepage, large stones.	Deep to water	Slope, large stones, droughty.	Slope, large stones, depth to rock.	Too arid, large stones, slope.
154*:						
Nazaton	Severe: seepage, slope.	Moderate: large stones.	Deep to water	Slope, large stones.	Slope, large stones.	Large stones, slope.
Naz	Severe: seepage, slope.	Moderate: seepage, piping.	Deep to water	Slope	Slope	Slope.
155--- Newell	Slight	Slight	Deep to water	Erodes easily	Erodes easily	Erodes easily.
156, 157--- Newell	Moderate: slope.	Slight	Deep to water	Slope, erodes easily.	Erodes easily	Erodes easily.
158--- Newell	Moderate: seepage, slope.	Severe: thin layer.	Deep to water	Slope	Erodes easily	Erodes easily.
159--- Notus	Severe: seepage.	Severe: seepage.	Deep to water	Droughty	Large stones, too sandy, soil blowing.	Large stones, droughty.
160--- Nyssaton	Slight	Severe: piping.	Deep to water	Percs slowly, erodes easily.	Erodes easily, percs slowly.	Too arid, erodes easily.
161*:						
Odermott	Severe: seepage, slope.	Severe: seepage.	Deep to water	Slope	Slope, too sandy.	Slope.
Appledellia	Severe: seepage, slope.	Severe: seepage.	Deep to water	Slope, percs slowly, cemented pan.	Slope, cemented pan, erodes easily.	Slope, erodes easily, cemented pan.
162--- Oldsferry	Severe: slope.	Severe: thin layer.	Deep to water	Slope, droughty, depth to rock.	Slope, large stones, depth to rock.	Large stones, slope, droughty.
163--- Onyx	Moderate: seepage.	Severe: piping.	Deep to water	Erodes easily	Erodes easily	Erodes easily.
164--- Owyhee	Moderate: seepage.	Severe: piping.	Deep to water	Percs slowly, erodes easily.	Erodes easily, percs slowly.	Too arid, erodes easily.
165, 166--- Owyhee	Moderate: seepage, slope.	Severe: piping.	Deep to water	Slope, percs slowly, erodes easily.	Erodes easily, percs slowly.	Too arid, erodes easily.
167, 168--- Owyhee	Severe: slope.	Severe: piping.	Deep to water	Slope, percs slowly, erodes easily.	Slope, erodes easily, percs slowly.	Too arid, slope, erodes easily.
169--- Paniogue	Severe: seepage.	Severe: seepage.	Deep to water	Favorable	Too sandy	Too arid.

See footnote at end of table.

Table 12.--Water Management--Continued

Soil name and map symbol	Limitations for--		Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Drainage	Irrigation	Terraces and diversions	Grassed waterways
170, 171---------- Payette	Severe: seepage, slope.	Severe: seepage, piping.	Deep to water	Slope, droughty.	Slope, too sandy.	Too arid, slope.
172*:						
Payette----------	Severe: seepage, slope.	Severe: seepage, piping.	Deep to water	Slope, droughty.	Slope, too sandy.	Too arid, slope.
Van Dusen--------	Severe: seepage, slope.	Severe: piping.	Deep to water	Slope----------	Slope----------	Slope.
173*:						
Power------------	Moderate: seepage.	Severe: piping.	Deep to water	Erodes easily	Erodes easily	Too arid, erodes easily.
Purdam-----------	Severe: seepage.	Severe: seepage.	Deep to water	Cemented pan, rooting depth.	Cemented pan, erodes easily.	Too arid, erodes easily.
174*, 175*:						
Power------------	Moderate: seepage, slope.	Severe: piping.	Deep to water	Slope, erodes easily.	Erodes easily	Too arid, erodes easily.
Purdam-----------	Severe: seepage.	Severe: seepage.	Deep to water	Slope, cemented pan, rooting depth.	Cemented pan, erodes easily.	Too arid, erodes easily.
176, 177, 178----- Riggins	Severe: depth to rock, slope.	Severe: large stones.	Deep to water	Slope, large stones, droughty.	Slope, large stones, depth to rock.	Large stones, slope, droughty.
179. Riverwash						
180*: Rock outcrop.						
Bakeoven---------	Severe: depth to rock, slope.	Severe: large stones.	Deep to water	Slope, large stones, droughty.	Slope, large stones, depth to rock.	Large stones, slope, droughty.
181---------- Rockly	Severe: depth to rock, slope.	Severe: thin layer.	Deep to water	Slope, droughty, depth to rock.	Slope, large stones, depth to rock.	Large stones, slope, droughty.
182*:						
Rockly-----------	Severe: depth to rock, slope.	Severe: thin layer.	Deep to water	Slope, droughty, depth to rock.	Slope, large stones, depth to rock.	Large stones, slope, droughty.
Riggins----------	Severe: depth to rock, slope.	Severe: large stones.	Deep to water	Slope, large stones, droughty.	Slope, large stones, depth to rock.	Large stones, slope, droughty.
183*:						
Rockly-----------	Severe: depth to rock, slope.	Severe: large stones.	Deep to water	Slope, large stones, depth to rock.	Slope, large stones, depth to rock.	Large stones, slope, droughty.

See footnote at end of table.

Table 12.--Water Management--Continued

Soil name and map symbol	Limitations for--		Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Drainage	Irrigation	Terraces and diversions	Grassed waterways
183*:						
Riggins	Severe: depth to rock, slope.	Severe: large stones.	Deep to water	Slope, large stones, droughty.	Slope, large stones, depth to rock.	Large stones, slope, droughty.
184*:						
Rockly	Severe: depth to rock, slope.	Severe: thin layer.	Deep to water	Slope, droughty, depth to rock.	Slope, large stones, depth to rock.	Large stones, slope, droughty.
Rock outcrop.						
185*:						
Rockly	Severe: depth to rock, slope.	Severe: thin layer.	Deep to water	Slope, droughty, depth to rock.	Slope, large stones, depth to rock.	Large stones, slope, droughty.
Starveout	Severe: slope.	Moderate: hard to pack.	Deep to water	Slope	Slope	Slope.
McDaniel	Severe: slope.	Moderate: large stones.	Deep to water	Slope, large stones, droughty.	Slope, large stones.	Large stones, slope, droughty.
186--- Roseberry	Severe: seepage.	Severe: piping, wetness.	Flooding, frost action.	Wetness, droughty, flooding.	Wetness	Droughty.
187*, 188*:						
Shellrock	Severe: seepage, slope.	Severe: seepage, piping.	Deep to water	Slope, droughty, fast intake.	Slope, too sandy, soil blowing.	Slope, droughty.
Rock outcrop.						
189, 190--- Shoepeg	Severe: seepage.	Severe: thin layer.	Favorable	Wetness	Wetness	Favorable.
191*:						
Starveout	Severe: slope.	Moderate: hard to pack.	Deep to water	Slope	Slope	Slope.
Gwin	Severe: depth to rock, slope.	Severe: large stones.	Deep to water	Slope, large stones, droughty.	Slope, large stones, depth to rock.	Large stones, slope, droughty.
McDaniel	Severe: slope.	Moderate: large stones.	Deep to water	Slope, large stones, droughty.	Slope, large stones.	Large stones, slope, droughty.
192--- Sudpeak	Severe: slope.	Moderate: hard to pack.	Deep to water	Slope, percs slowly.	Slope, erodes easily, percs slowly.	Slope, erodes easily, percs slowly.
193--- Swede	Severe: slope.	Moderate: piping.	Deep to water	Slope, erodes easily.	Slope, erodes easily.	Slope, erodes easily.
194--- Tamrad	Severe: slope.	Severe: large stones.	Deep to water	Slope, large stones, droughty.	Slope, large stones, depth to rock.	Large stones, slope, droughty.

See footnote at end of table.

Table 12.--Water Management--Continued

Soil name and map symbol	Limitations for--		Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Drainage	Irrigation	Terraces and diversions	Grassed waterways
195---------- Ticanot	Severe: depth to rock, slope.	Severe: large stones.	Deep to water	Slope, large stones, droughty.	Slope, large stones, depth to rock.	Large stones, slope, droughty.
196*, 197*:						
Tindahay---------	Severe: seepage.	Severe: seepage, piping.	Deep to water	Slope, droughty, fast intake.	Too sandy, soil blowing.	Too arid, droughty.
Cashmere---------	Severe: seepage.	Severe: piping.	Deep to water	Slope, soil blowing.	Erodes easily, soil blowing.	Too arid, erodes easily.
198*:						
Tindahay---------	Severe: seepage, slope.	Severe: seepage, piping.	Deep to water	Slope, droughty, fast intake.	Slope, too sandy, soil blowing.	Too arid, slope, droughty.
Cashmere---------	Severe: seepage, slope.	Severe: piping.	Deep to water	Slope, soil blowing.	Slope, erodes easily, soil blowing.	Too arid, slope, erodes easily.
199---------- Typic Xerofluvents	Severe: seepage, slope.	Severe: seepage, large stones.	Flooding, large stones, slope.	Slope, large stones, wetness.	Slope, large stones, wetness.	Large stones, slope, droughty.
200*:						
Van Dusen--------	Severe: seepage, slope.	Severe: piping.	Deep to water	Slope----------	Slope----------	Slope.
Haw----------	Severe: seepage, slope.	Severe: piping.	Deep to water	Slope----------	Slope, erodes easily.	Too arid, slope, erodes easily.
201---------- Wapshilla	Severe: slope.	Slight---------	Deep to water	Slope----------	Slope----------	Slope.

* See description of the map unit for composition and behavior characteristics of the map unit.

Table 13.--Engineering Index Properties

(The symbol < means less than; > means more than. Absence of an entry indicates that data were not estimated)

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments > 10 inches	Frag-ments 3-10 inches	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO			4	10	40	200		
	In				Pct	Pct					Pct	
1----------	0-4	Silt loam-----	CL-ML, ML	A-4	0	0	100	100	95-100	75-95	20-30	NP-10
Abo	4-11	Silty clay loam.	CL	A-6, A-7	0	0	100	100	95-100	75-85	30-45	10-20
	11-60	Silt loam-----	CL-ML, CL	A-4, A-6	0	0	100	100	95-100	75-85	25-35	5-15
2, 3----------	0-4	Clay----------	MH, CH	A-7	0	0	100	100	95-100	85-95	90-115	50-70
Agerdelly	4-38	Clay----------	MH, CH	A-7	0	0	100	100	100	85-95	90-115	50-70
	38-60	Clay----------	MH, CH	A-7	0	0	100	100	100	85-95	90-115	50-70
4*, 5*:												
Agerdelly----	0-4	Clay----------	MH, CH	A-7	0	0	100	100	95-100	85-95	90-115	50-70
	4-38	Clay----------	MH, CH	A-7	0	0	100	100	100	85-95	90-115	50-70
	38-60	Clay----------	MH, CH	A-7	0	0	100	100	100	85-95	90-115	50-70
Devnot-------	0-4	Very stony clay loam.	CL	A-6, A-7	10-25	5-10	80-95	75-90	70-85	55-70	30-45	10-25
	4-19	Stony clay----	CH	A-7	15-25	0-10	85-95	80-90	50-80	50-75	50-70	35-50
	19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
6, 7----------	0-10	Loam----------	CL-ML, CL	A-4, A-6	0	0	95-100	95-100	80-95	60-75	25-35	5-15
Appledellia	10-18	Clay, clay loam.	CL	A-6, A-7	0	0	90-100	90-100	85-100	75-95	35-50	15-25
	18-32	Clay, gravelly clay.	CL, CH	A-7	0	0-10	70-95	65-90	60-90	50-80	45-65	25-40
	32-33	Indurated-----	---	---	---	---	---	---	---	---	---	---
	33-60	Extremely gravelly sand, extremely gravelly coarse sand.	GP	A-1	0	5-45	10-25	10-25	5-20	0-5	---	NP
8----------	0-10	Clay loam-----	CL	A-6	0	0	95-100	95-100	85-100	70-80	30-40	10-20
Appledellia	10-18	Clay, clay loam.	CL	A-6, A-7	0	0	90-100	90-100	85-100	75-95	35-50	15-25
	18-32	Clay, gravelly clay.	CL, CH	A-7	0	0-10	70-95	65-90	60-90	50-80	45-65	25-40
	32-33	Indurated-----	---	---	---	---	---	---	---	---	---	---
	33-60	Extremely gravelly sand, extremely gravelly coarse sand.	GP	A-1	0	5-45	10-25	10-25	5-20	0-5	---	NP

See footnote at end of table.

Table 13.--Engineering Index Properties--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments > 10 inches	Frag-ments 3-10 inches	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO			4	10	40	200		
	In				Pct	Pct					Pct	
9*:												
Appledellia--	0-10	Loam----------	CL-ML, CL	A-4, A-6	0	0	95-100	95-100	80-95	60-75	25-35	5-15
	10-18	Clay, clay loam.	CL	A-6, A-7	0	0	90-100	90-100	85-100	75-95	35-50	15-25
	18-32	Clay, gravelly clay.	CL, CH	A-7	0	0-10	70-95	65-90	60-90	50-80	45-65	25-40
	32-33	Indurated-----	---	---	---	---	---	---	---	---	---	---
	33-60	Extremely gravelly sand, extremely gravelly coarse sand.	GP	A-1	0	5-45	10-25	10-25	5-20	0-5	---	NP
Applashall---	0-6	Gravelly clay loam.	GC	A-6, A-7	0	0-10	60-70	60-70	55-60	40-50	35-45	15-20
	6-12	Very gravelly clay loam.	GC	A-7, A-2	0	0-10	40-55	40-50	35-50	25-40	40-50	15-25
	12-13	Indurated-----	---	---	---	---	---	---	---	---	---	---
	13-60	Extremely gravelly sand, extremely gravelly coarse sand.	GP	A-1	0	5-45	10-25	10-25	5-20	0-5	---	NP
10*:												
Appledellia--	0-10	Loam----------	CL-ML, CL	A-4, A-6	0	0	95-100	95-100	80-95	60-75	25-35	5-15
	10-32	Clay, gravelly clay.	CL, CH	A-7	0	0-10	70-95	65-90	60-90	50-80	45-65	25-40
	32-33	Indurated-----	---	---	---	---	---	---	---	---	---	---
	33-60	Extremely gravelly sand, extremely gravelly coarse sand.	GP	A-1	0	5-45	10-25	10-25	5-20	0-5	---	NP
Applashall---	0-6	Gravelly clay loam.	GC	A-6, A-7	0	0-10	60-70	60-70	55-60	40-50	35-45	15-20
	6-12	Very gravelly clay loam.	GC	A-7, A-2	0	0-10	40-55	40-50	35-50	25-40	40-50	15-25
	12-13	Indurated-----	---	---	---	---	---	---	---	---	---	---
	13-60	Extremely gravelly sand, extremely gravelly coarse sand.	GP	A-1	0	5-45	10-25	10-25	5-20	0-5	---	NP
11*, 12*:												
Appledellia--	0-10	Clay loam-----	CL	A-6	0	0	95-100	95-100	85-100	70-80	30-40	10-20
	10-32	Clay, gravelly clay.	CL, CH	A-7	0	0-10	70-95	65-90	60-90	50-80	45-65	25-40
	32-33	Indurated-----	---	---	---	---	---	---	---	---	---	---
	33-60	Extremely gravelly sand, extremely gravelly coarse sand.	GP	A-1	0	5-45	10-25	10-25	5-20	0-5	---	NP

See footnote at end of table.

Table 13.--Engineering Index Properties--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments > 10 inches	Frag-ments 3-10 inches	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO			4	10	40	200		
	In				Pct	Pct					Pct	
11*, 12*:												
Odermott-----	0-15	Clay loam-----	CL	A-6	0	0-5	100	95-100	85-100	60-80	35-40	15-20
	15-34	Clay, clay loam, sandy clay loam.	CL, CH	A-7	0	0	90-100	90-100	80-100	60-80	45-60	20-35
	34-60	Stratified cobbly sand to gravel.	GP	A-1	0-5	0-30	15-45	5-40	0-30	0-10	---	NP
13*:												
Bakeoven-----	0-3	Extremely stony loam.	GM, SM	A-4	25-40	20-30	65-80	60-75	50-70	35-50	25-35	NP-10
	3-9	Very gravelly clay loam, very cobbly loam, very gravelly loam.	GM, GC	A-4, A-6	5-15	15-40	50-65	45-60	40-55	35-50	30-40	5-15
	9	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
Reywat-------	0-6	Very stony loam.	GM, ML, GM-GC, CL-ML	A-4	20-35	5-25	55-85	50-80	40-70	35-55	25-35	5-10
	6-19	Very gravelly clay loam, very gravelly loam, very gravelly sandy clay loam.	GC	A-2, A-6, A-7	0-5	5-20	40-60	35-55	30-45	25-40	35-50	15-25
	19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
14*:												
Bakeoven-----	0-3	Extremely stony loam.	GM, SM	A-4	25-40	20-30	65-80	60-75	50-70	35-50	25-35	NP-10
	3-9	Very gravelly clay loam, very cobbly loam, very gravelly loam.	GM, GC	A-4, A-6	5-15	15-40	50-65	45-60	40-55	35-50	30-40	5-15
	9	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
Reywat-------	0-6	Very stony loam.	GM, ML, GM-GC, CL-ML	A-4	20-35	5-25	55-85	50-80	40-70	35-55	25-35	5-10
	6-19	Very gravelly clay loam, very gravelly loam, very gravelly sandy clay loam.	GC	A-2, A-6, A-7	0-5	5-20	40-60	35-55	30-45	25-40	35-50	15-25
	19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
Rock outcrop.												

See footnote at end of table.

Table 13.--Engineering Index Properties--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments	Frag-ments	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	> 10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
15----------	0-15	Silt loam-----	ML, CL-ML	A-4	0	0	90-100	90-100	75-100	55-90	20-30	NP-10
Baldock	15-38	Loam, silt loam.	CL-ML, CL	A-4, A-6	0	0	90-100	90-100	75-100	55-85	20-30	5-15
	38-60	Fine sandy loam, sandy loam.	SM	A-2, A-4	0	0	75-100	75-100	50-80	25-50	20-25	NP-5
16----------	0-15	Clay loam-----	CL	A-6	0	0	100	100	90-100	70-95	30-40	10-20
Baldock	15-38	Loam, silt loam.	CL-ML, CL	A-4, A-6	0	0	90-100	90-100	75-100	55-85	20-30	5-15
	38-60	Fine sandy loam, sandy loam.	SM	A-2, A-4	0	0	75-100	75-100	50-80	25-50	20-25	NP-5
17, 18--------	0-9	Loam----------	ML, CL-ML	A-4	0	0	100	100	85-95	60-75	20-30	NP-10
Bissell	9-48	Clay loam, sandy clay loam.	CL, SC	A-6	0	0	100	95-100	80-100	35-80	30-35	10-15
	48-55	Loam----------	ML, CL-ML	A-4	0	0	100	95-100	85-95	60-75	20-30	NP-10
	55-60	Very gravelly loamy coarse sand.	GP-GM	A-1	0	0	35-50	30-40	15-30	5-10	---	NP
19----------	0-10	Clay loam-----	CL	A-6	0	0	90-100	80-100	70-90	50-70	30-40	10-15
Blackwell	10-60	Stratified clay loam to gravelly coarse sand.	CL-ML, CL, SC, SC-SM	A-4, A-6	0	0	80-100	75-100	55-80	45-65	25-35	5-15
20, 21--------	0-10	Cobbly loam---	SC	A-6	0-5	15-25	85-95	50-70	45-70	35-50	30-40	10-15
Bluebell	10-24	Very gravelly clay loam, very gravelly silty clay loam, very cobbly clay loam.	GC	A-2	0-5	15-25	30-55	25-50	20-35	15-25	30-40	10-15
	24	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
22----------	0-4	Extremely stony loam.	GM	A-4	40-60	0-30	55-75	50-70	45-60	35-50	20-30	NP-5
Bluesprin	4-12	Coarse sandy loam.	SM	A-4	0	0-5	90-100	80-90	55-65	35-45	20-25	NP-5
	12-16	Very gravelly clay loam, very gravelly loam.	GC	A-2	0	5-25	40-60	30-45	25-40	20-35	35-45	15-25
	16-23	Very gravelly sandy loam, extremely gravelly sandy loam.	GM, GP-GM, GP-GC, GM-GC	A-2, A-1	0	5-25	25-55	15-45	10-30	5-15	20-30	NP-10
	23	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---

See footnote at end of table.

Table 13.--Engineering Index Properties--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments > 10 inches	Frag-ments 3-10 inches	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO			4	10	40	200		
	In				Pct	Pct					Pct	
23*:												
Brody--------	0-14	Loam----------	ML	A-4	0	0-5	95-100	95-100	80-95	60-75	30-50	5-10
	14-35	Very cobbly silt loam, very gravelly loam, very cobbly loam.	GM-GC	A-4	0	20-30	50-70	35-60	35-60	35-50	20-30	5-10
	35	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
Culdecole----	0-2	Loam----------	ML, MH	A-5	0	0	90-100	85-100	80-95	70-90	40-60	5-10
	2-14	Loam, silt loam.	ML	A-4, A-5	0	0	90-100	85-100	80-95	65-85	30-50	NP-10
	14-50	Clay loam, silty clay loam, cobbly clay loam.	CL	A-6	0-5	0-25	90-100	80-100	70-90	55-85	30-40	10-20
	50	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
24, 25, 26----	0-12	Sandy loam----	SM	A-2	0	0	90-100	85-100	50-65	25-35	---	NP
Brownlee	12-32	Clay loam, loam, sandy clay loam.	CL	A-6	0	0	75-100	75-100	60-95	50-75	30-40	10-15
	32-60	Stratified coarse sand to silt loam.	SC-SM, SM	A-4, A-2	0	0	75-100	75-100	50-75	25-40	20-30	NP-10
27----------	0-12	Loam----------	CL-ML	A-4	0	0	75-100	75-100	60-90	50-75	25-30	5-10
Brownlee	12-32	Clay loam, loam, sandy clay loam.	CL	A-6	0	0	75-100	75-100	60-95	50-75	30-40	10-15
	32-60	Stratified coarse sand to silt loam.	SC-SM, SM	A-4, A-2	0	0	75-100	75-100	50-75	25-40	20-30	NP-10
28----------	0-14	Coarse sandy loam.	SM	A-2, A-4	0	0	95-100	95-100	60-70	30-40	20-25	NP-5
Bryan	14-60	Gravelly loamy coarse sand, loamy coarse sand.	SM	A-1	0	0	70-85	55-80	35-50	10-25	---	NP
29----------	0-12	Silty clay loam.	CL	A-6	0	0	100	100	95-100	85-95	30-40	15-20
Cabarton	12-16	Silt----------	ML, CL-ML	A-4	0	0	100	100	95-100	90-100	20-30	NP-5
	16-40	Clay----------	CL, CH	A-7	0	0	100	100	90-100	75-95	45-60	20-30
	40-60	Clay loam-----	CL	A-6	0	0	100	100	90-100	70-80	30-40	15-25
30, 31--------	0-11	Sandy loam----	SM	A-4	0	0	95-100	90-100	80-90	40-50	---	NP
Cashmere	11-60	Fine sandy loam, coarse sandy loam, sandy loam.	SM	A-2, A-4	0	0-5	80-100	80-100	50-85	25-40	15-20	NP-5
32----------	0-22	Silt loam-----	ML	A-4	0	0	100	100	95-100	80-95	30-35	5-10
Catherine	22-60	Silt loam, silty clay loam.	ML, CL	A-4, A-6	0	0	100	100	95-100	80-95	30-40	5-15

See footnote at end of table.

Table 13.--Engineering Index Properties--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments	Frag-ments	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	> 10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
33*:												
Chilcott-----	0-7	Silt loam-----	CL-ML, ML	A-4	0	0	95-100	95-100	90-100	65-90	20-30	NP-10
	7-26	Silty clay loam, clay, silty clay.	CL, CH	A-7	0	0	95-100	95-100	85-100	70-95	45-60	25-40
	26-40	Silt loam, clay loam, loam.	CL-ML, CL	A-4, A-6	0	0	90-100	90-100	85-100	70-90	25-35	5-15
	40-44	Indurated-----	---	---	---	---	---	---	---	---	---	---
	44-60	Very gravelly sand, sandy loam.	GM, GP-GM, SM, SP-SM	A-1	0	0-5	50-65	35-50	20-35	5-20	---	NP
Vickery------	0-10	Silt loam-----	CL-ML, ML	A-4	0	0	100	100	90-100	70-90	20-30	NP-10
	10-38	Silt loam, loam.	ML, CL-ML	A-4	0	0	100	100	90-100	70-85	25-35	5-10
	38-42	Indurated-----	---	---	---	---	---	---	---	---	---	---
	42-60	Sand, coarse sand, gravelly loamy coarse sand.	SM, SP-SM	A-1	0	0	95-100	70-100	30-50	5-25	---	NP
34, 35-------- Clems	0-10	Fine sandy loam.	SM	A-4	0	0	100	95-100	75-85	40-50	20-30	NP-5
	10-56	Fine sandy loam, sandy loam.	SM	A-4	0	0	100	95-100	75-100	35-50	20-30	NP-5
	56-60	Silt loam-----	ML	A-4	0	0	100	95-100	90-100	75-85	25-35	NP-10
36---------- Cranecreek	0-18	Loam----------	CL-ML	A-4	0	0	100	100	85-95	60-75	25-30	5-10
	18-35	Clay loam, clay.	CL	A-6, A-7	0	0	85-100	85-100	75-100	60-95	30-45	10-20
	35	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
37*:												
Cranecreek---	0-18	Loam----------	CL-ML	A-4	0	0	100	100	85-95	60-75	25-30	5-10
	18-35	Clay loam, clay.	CL	A-6, A-7	0	0	85-100	85-100	75-100	60-95	30-45	10-20
	35	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
Reywat-------	0-6	Very stony loam.	GM, ML, GM-GC, CL-ML	A-4	20-35	5-25	55-85	50-80	40-70	35-55	25-35	5-10
	6-19	Very gravelly clay loam, very gravelly loam, very gravelly sandy clay loam.	GC	A-2, A-6, A-7	0-5	5-20	40-60	35-55	30-45	25-40	35-50	15-25
	19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---

See footnote at end of table.

Table 13.--Engineering Index Properties--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments > 10 inches	Fragments 3-10 inches	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO			4	10	40	200		
	In				Pct	Pct					Pct	
38*:												
Culdecole----	0-2	Loam----------	ML, MH	A-5	0	0	90-100	85-100	80-95	70-90	40-60	5-10
	2-14	Loam, silt loam.	ML	A-4, A-5	0	0	90-100	85-100	80-95	65-85	30-50	NP-10
	14-50	Clay loam, silty clay loam, cobbly clay loam.	CL	A-6	0-5	0-25	90-100	80-100	70-90	55-85	30-40	10-20
	50	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
Brody--------	0-14	Loam----------	ML	A-4	0	0-5	95-100	95-100	80-95	60-75	30-50	5-10
	14-35	Very cobbly silt loam, very gravelly loam, very cobbly loam.	GM-GC	A-4	0	20-30	50-70	35-60	35-60	35-50	20-30	5-10
	35	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
39----------	0-23	Loam----------	CL-ML	A-4	0	0	100	95-100	80-90	60-75	20-30	5-10
Dagor	23-60	Loam----------	CL-ML	A-4	0	0	100	95-100	80-90	60-75	20-30	5-10
40, 41--------	0-20	Loam----------	CL-ML	A-4	0-5	0-5	90-100	90-100	75-95	55-75	25-30	5-10
Damast	20-51	Gravelly loam	GC, GM-GC	A-4, A-6, A-2	0-10	0-10	55-75	50-70	40-60	30-50	25-35	5-15
	51-60	Very gravelly loam.	CL, CL-ML, GC, GM-GC	A-4, A-6	0-15	0-15	55-80	50-75	40-70	35-55	25-35	5-15
42, 43--------	0-17	Loam----------	CL-ML, ML	A-4	0	0-5	80-100	80-100	70-100	60-90	25-35	5-10
Demasters	17-25	Loam, silt loam.	CL-ML, CL	A-4, A-6	0	0-10	85-100	85-100	70-90	60-80	25-35	5-15
	25-45	Very gravelly loam, cobbly silty clay loam, very cobbly loam.	GC, CL	A-6, A-2	0	5-35	45-80	40-75	35-75	25-60	25-35	10-15
	45	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
44----------	0-5	Loam----------	CL-ML, CL	A-4, A-6	0	0	100	100	85-95	60-75	25-35	5-15
Demoss	5-9	Clay loam-----	CL	A-6, A-7	0	0	100	100	90-100	70-80	35-45	15-20
	9-12	Clay, clay loam.	CL, CH	A-7	0	0	100	100	90-100	75-95	45-55	20-30
	12-17	Cemented------	---	---	---	---	---	---	---	---	---	---
	17	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
45, 46, 47, 48----------	0-15	Silty clay loam.	CL	A-6, A-7	0	0	95-100	95-100	95-100	85-95	30-50	15-30
Deshler	15-30	Silty clay loam, clay loam, clay.	CL, CH	A-6, A-7	0	0	95-100	95-100	90-100	75-95	35-65	20-40
	30	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---

See footnote at end of table.

Table 13.--Engineering Index Properties--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments > 10 inches	Fragments 3-10 inches	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO			4	10	40	200		
	In				Pct	Pct					Pct	
49, 50-------- Deshler	0-15	Extremely stony clay loam.	CL	A-6, A-7	40-50	30-40	95-100	95-100	90-100	85-95	35-45	15-25
	15-30	Silty clay loam, clay.	CL, CH	A-7	0	0	95-100	95-100	90-100	75-95	45-55	20-30
	30	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
51*, 52*: Deshler------	0-15	Silty clay loam.	CL	A-6, A-7	0	0	95-100	95-100	95-100	85-95	30-50	15-30
	15-30	Silty clay loam, clay loam, clay.	CL, CH	A-6, A-7	0	0	95-100	95-100	90-100	75-95	35-65	20-40
	30	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
Agerdelly----	0-4	Clay----------	MH, CH	A-7	0	0	100	100	95-100	85-95	90-115	50-70
	4-38	Clay----------	MH, CH	A-7	0	0	100	100	100	85-95	90-115	50-70
	38-60	Clay----------	MH, CH	A-7	0	0	100	100	100	85-95	90-115	50-70
53*, 54*: Deshler------	0-15	Extremely stony silty clay loam.	CL	A-6, A-7	40-50	30-40	95-100	95-100	90-100	85-95	35-45	15-25
	15-30	Silty clay loam, clay.	CL, CH	A-7	0	0	95-100	95-100	90-100	75-95	45-55	20-30
	30	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
Agerdelly----	0-4	Extremely stony clay.	MH, CH	A-7	50-60	15-20	95-100	90-100	90-100	85-95	90-115	50-70
	4-38	Clay----------	MH, CH	A-7	0	0	100	100	100	85-95	90-115	50-70
	38-60	Clay----------	MH, CH	A-7	0	0	100	100	100	85-95	90-115	50-70
55*, 56*, 57*: Deshler------	0-15	Loam----------	CL-ML, ML	A-4	0	0	95-100	95-100	85-95	60-75	25-35	5-10
	15-30	Silty clay loam, clay loam, clay.	CL, CH	A-6, A-7	0	0	95-100	95-100	90-100	75-95	35-65	20-40
	30	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
Brownlee-----	0-12	Sandy loam----	SM	A-2	0	0	90-100	85-100	50-65	25-35	---	NP
	12-32	Clay loam, loam, sandy clay loam.	CL	A-6	0	0	75-100	75-100	60-95	50-75	30-40	10-15
	32-60	Stratified coarse sand to silt loam.	SC-SM, SM	A-4, A-2	0	0	75-100	75-100	50-75	25-40	20-30	NP-10
58*, 59*: Deshler------	0-15	Silty clay loam.	CL	A-6, A-7	0	0	95-100	95-100	95-100	85-95	30-50	15-30
	15-30	Silty clay loam, clay loam, clay.	CL, CH	A-6, A-7	0	0	95-100	95-100	90-100	75-95	35-65	20-40
	30	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---

See footnote at end of table.

Table 13.--Engineering Index Properties--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments > 10 inches	Frag-ments 3-10 inches	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO			4	10	40	200		
	In				Pct	Pct					Pct	
58*, 59*:												
Devnot-------	0-4	Very stony clay loam.	CL	A-6, A-7	10-25	5-10	80-95	75-90	70-85	55-70	30-45	10-25
	4-19	Stony clay----	CH	A-7	15-25	0-10	85-95	80-90	50-80	50-75	50-70	35-50
	19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
60----------	0-5	Silt loam-----	CL-ML	A-4	0	0	95-100	85-100	85-100	70-90	20-30	5-10
Deterson	5-23	Silt loam-----	CL-ML	A-4	0	0	95-100	95-100	85-100	70-90	20-30	5-10
	23-60	Clay, clay loam, silty clay.	CH, CL	A-7	0	0	85-100	80-100	70-100	60-95	40-70	20-40
61----------	0-6	Clay loam-----	CL	A-7, A-6	0	0	85-100	80-100	70-100	55-80	30-45	15-25
Deterson	6-14	Silt loam-----	CL-ML	A-4	0	0	95-100	95-100	85-100	70-90	20-30	5-10
	14-60	Clay, clay loam, silty clay.	CH, CL	A-7	0	0	85-100	80-100	70-100	60-95	40-70	20-40
62*:												
Dishner------	0-8	Extremely stony loam.	CL-ML, CL	A-4, A-6	30-40	20-45	85-100	80-100	70-85	50-65	25-35	5-15
	8-12	Clay, cobbly clay, gravelly clay.	CH, MH	A-7	0-5	0-15	65-90	65-90	60-90	60-90	55-80	25-50
	12	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
Haw----------	0-17	Silt loam-----	ML, CL-ML	A-4	0	0	100	95-100	85-100	60-90	20-30	NP-10
	17-38	Clay loam, sandy clay loam, loam.	CL, SC	A-6	0	0	100	95-100	70-100	35-80	30-40	10-20
	38-60	Coarse sandy loam, loam, sandy loam.	SM, ML, SC, CL	A-2, A-4, A-6	0	0-5	100	95-100	60-95	30-75	20-35	NP-15
63----------	0-20	Sandy loam----	SM	A-2, A-4	0	0	95-100	80-90	55-65	30-40	---	NP
Donnel	20-39	Sandy loam, coarse sandy loam.	SM	A-2	0	0	95-100	85-95	55-65	20-35	---	NP
	39-60	Loamy coarse sand, loamy sand.	SM	A-1	0	0	95-100	85-95	25-35	15-25	---	NP
64. Duneland												
65, 66--------	0-12	Silt loam-----	CL-ML, CL	A-4, A-6	0	0	95-100	95-100	95-100	75-90	25-40	5-15
Elijah	12-20	Silty clay loam, silt loam.	CL	A-6, A-7	0	0	95-100	95-100	95-100	75-95	30-45	10-20
	20-38	Silt loam, loam.	CL-ML	A-4	0	0	95-100	95-100	95-100	75-90	20-30	5-10
	38-53	Indurated-----	---	---	---	---	---	---	---	---	---	---
	53-60	Stratified fine sandy loam to sand.	SP-SM, SM	A-2, A-3	0	0	100	100	50-70	5-30	15-20	NP-5

See footnote at end of table.

Table 13.--Engineering Index Properties--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments	Frag-ments	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	> 10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
67---------- Falk	0-10	Fine sandy loam.	SM, SC-SM	A-4	0	0	100	100	70-85	40-50	20-30	NP-10
	10-38	Fine sandy loam, sandy loam.	SM, SC-SM	A-2, A-4	0	0	90-100	80-100	45-85	25-50	20-30	NP-10
	38-60	Very gravelly coarse sandy loam, very gravelly sand.	GP, GP-GM, GM	A-1	0	0-5	35-50	35-50	15-35	0-20	---	NP
68, 69-------- Gem	0-10	Stony clay loam.	CL	A-6, A-7	5-10	0-10	75-85	70-80	50-65	50-60	35-50	15-25
	10-29	Gravelly clay loam, gravelly clay, clay.	CH	A-7	0-5	0-10	65-95	60-90	50-80	50-75	50-75	35-50
	29	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
70---------- Gem	0-10	Extremely stony clay loam.	CL, SC, GC	A-6, A-7	20-30	20-30	65-85	60-80	45-65	45-60	35-50	15-25
	10-29	Gravelly clay loam, gravelly clay, clay.	CH	A-7	0-5	0-10	65-95	60-90	50-80	50-75	50-75	35-50
	29	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
71*, 72*: Gem----------	0-10	Very stony clay loam.	CL, SC, GC	A-6, A-7	20-30	20-30	65-85	60-80	45-65	45-60	35-50	15-25
	10-29	Gravelly clay loam, gravelly clay, clay.	CH	A-7	0-5	0-10	65-95	60-90	50-80	50-75	50-75	35-50
	29	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
Baboven-----	0-3	Extremely stony loam.	GM, SM	A-4	25-40	20-30	65-80	60-75	50-70	35-50	25-35	NP-10
	3-9	Very gravelly clay loam, very cobbly loam, very gravelly loam.	GM, GC	A-4, A-6	5-15	15-40	50-65	45-60	40-55	35-50	30-40	5-15
	9	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
73*, 74*: Gem----------	0-10	Very stony clay loam.	CL, SC, GC	A-6, A-7	20-30	20-30	65-85	60-80	45-65	45-60	35-50	15-25
	10-29	Gravelly clay loam, gravelly clay, clay.	CH	A-7	0-5	0-10	65-95	60-90	50-80	50-75	50-75	35-50
	29	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---

See footnote at end of table.

Table 13.--Engineering Index Properties--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments > 10 inches	Fragments 3-10 inches	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO			4	10	40	200		
	In				Pct	Pct					Pct	
73*, 74*:												
Reywat-------	0-6	Very stony loam.	GM, ML, GM-GC, CL-ML	A-4	20-35	5-25	55-85	50-80	40-70	35-55	25-35	5-10
	6-19	Very gravelly clay loam, very gravelly loam, very gravelly sandy clay loam.	GC	A-2, A-6, A-7	0-5	5-20	40-60	35-55	30-45	25-40	35-50	15-25
	19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
75, 76-------- Gestrin	0-17	Loam----------	CL-ML, SC-SM	A-4	0	0	100	80-90	60-70	45-60	25-30	5-10
	17-33	Coarse sandy loam, loam.	SM	A-4	0	0	100	80-90	55-65	35-50	20-25	NP-5
	33-42	Loamy coarse sand, gravelly loam.	SM	A-1, A-2	0	5-10	85-100	50-100	30-50	15-35	---	NP
	42-60	Very gravelly coarse sand, very gravelly sandy loam.	SP-SM, SM	A-1, A-2	0	10-20	80-90	30-50	10-25	5-20	---	NP
77, 78, 79---- Glasgow	0-13	Clay loam-----	CL	A-6, A-7	0	0	100	100	90-100	70-80	35-45	15-20
	13-38	Clay, clay loam.	CH, CL	A-7	0	0	100	100	90-100	70-95	40-60	20-40
	38	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
80*, 81*:												
Glasgow------	0-13	Clay loam-----	CL	A-6, A-7	0	0	100	100	90-100	70-80	35-45	15-20
	13-38	Clay, clay loam.	CH, CL	A-7	0	0	100	100	90-100	70-95	40-60	20-40
	38	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
Lankbush-----	0-12	Sandy loam----	SM, SC-SM	A-2, A-4	0	0	85-100	85-100	45-65	25-40	20-30	NP-10
	12-43	Sandy clay loam, clay loam, loam.	CL-ML, CL, SC-SM, SC	A-2, A-4, A-6	0	0	85-100	85-100	70-100	30-80	25-35	5-15
	43-60	Sand, sandy loam, loamy coarse sand.	SM, SP-SM	A-1, A-2, A-3	0	0	85-100	85-100	45-70	5-30	---	NP
82, 83, 84, 85---------- Greenleaf	0-12	Silt loam-----	CL-ML, ML	A-4	0	0	100	100	85-100	75-95	20-30	NP-10
	12-21	Silty clay loam, silt loam, loam.	CL	A-6	0	0	100	100	95-100	85-95	30-40	10-20
	21-60	Silt loam, silt.	CL-ML	A-4	0	0	100	100	100	90-100	15-25	5-10

See footnote at end of table.

Table 13.--Engineering Index Properties--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments > 10 inches	Frag-ments 3-10 inches	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO			4	10	40	200		
	In				Pct	Pct					Pct	
86----------	0-18	Loam----------	ML	A-4	0	0-10	95-100	90-100	80-95	60-75	30-40	5-10
Gross	18-38	Stony clay loam, loam, cobbly clay loam.	CL	A-6, A-7	0-10	0-25	95-100	90-100	90-100	60-75	30-45	10-20
	38	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
87----------	0-18	Silt loam-----	ML	A-4	0	0-10	95-100	90-100	80-95	60-75	30-40	5-10
Gross	18-38	Stony clay loam, loam, cobbly clay loam.	CL	A-6, A-7	0-10	0-25	95-100	90-100	90-100	60-75	30-45	10-20
	38	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
88*:												
Gross--------	0-18	Silt loam-----	ML	A-4	0	0-10	95-100	90-100	80-95	60-75	30-40	5-10
	18-38	Stony clay loam, loam, cobbly clay loam.	CL	A-6, A-7	0-10	0-25	95-100	90-100	90-100	60-75	30-45	10-20
	38	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
Bakeoven-----	0-3	Extremely stony loam.	GM, SM	A-4	25-40	20-30	65-80	60-75	50-70	35-50	25-35	NP-10
	3-9	Very gravelly clay loam, very cobbly loam, very gravelly loam.	GM, GC	A-4, A-6	5-15	15-40	50-65	45-60	40-55	35-50	30-40	5-15
	9	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
89*:												
Gross--------	0-18	Stony loam----	ML	A-4	0-10	0-25	95-100	90-100	80-95	60-75	30-40	5-10
	18-38	Stony clay loam, loam, cobbly clay loam.	CL	A-6, A-7	0-10	0-25	95-100	90-100	90-100	60-75	30-45	10-20
	38	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
Bakeoven-----	0-3	Extremely stony loam.	GM, SM	A-4	25-40	20-30	65-80	60-75	50-70	35-50	25-35	NP-10
	3-9	Very gravelly clay loam, very cobbly loam, very gravelly loam.	GM, GC	A-4, A-6	5-15	15-40	50-65	45-60	40-55	35-50	30-40	5-15
	9	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---

See footnote at end of table.

Table 13.--Engineering Index Properties--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments > 10 inches	Frag-ments 3-10 inches	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO			4	10	40	200		
	In				Pct	Pct					Pct	
90*:												
Gwin---------	0-5	Very stony loam.	GM, GM-GC	A-4	20-40	10-40	55-75	50-70	45-65	35-50	20-30	NP-10
	5-12	Extremely cobbly loam, very cobbly loam.	GC	A-2	0-10	35-60	30-55	25-50	20-45	20-35	30-40	10-20
	12-20	Extremely cobbly clay loam, extremely stony clay loam.	GC	A-2, A-7	25-40	15-30	30-55	25-50	25-45	20-40	40-50	20-25
	20	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
Rock outcrop.												
91, 92--------	0-23	Loam----------	CL-ML	A-4	0	0	95-100	95-100	85-95	60-75	20-30	5-10
Harpt	23-40	Silt loam, loam, fine sandy loam.	CL-ML, CL, SC, SC-SM	A-4, A-6	0	0	95-100	95-100	70-100	40-85	25-35	5-15
	40-60	Stratified coarse sandy loam to clay loam.	SM, ML	A-4	0	0	90-100	90-100	70-85	40-60	20-25	NP-5
93, 94, 95,												
96----------	0-17	Silt loam-----	ML, CL-ML	A-4	0	0	100	95-100	85-100	60-90	20-30	NP-10
Haw	17-38	Clay loam, sandy clay loam, loam.	CL, SC	A-6	0	0	100	95-100	70-100	35-80	30-40	10-20
	38-60	Coarse sandy loam, loam, sandy loam.	SM, ML, SC, CL	A-2, A-4, A-6	0	0-5	100	95-100	60-95	30-75	20-35	NP-15
97, 98, 99,												
100----------	0-13	Loam----------	CL	A-6	0	0-15	95-100	95-100	85-100	70-90	30-40	10-15
Jacknife	13-41	Silty clay loam, clay, clay loam.	CL, CH	A-7	0	0-20	95-100	95-100	90-100	70-95	45-65	20-35
	41-60	Cobbly clay loam, gravelly loam, gravelly clay loam.	SC, GC	A-7	0	5-30	60-80	55-70	40-55	35-50	40-50	15-25
101----------	0-13	Very stony loam.	CL-ML, CL, GC, GM-GC	A-4, A-6	20-25	15-40	65-80	60-75	50-75	40-65	25-40	5-15
Jacknife	13-41	Stony clay loam, cobbly clay.	CL, CH	A-7	5-10	10-19	95-100	95-100	80-100	60-80	40-60	20-35
	41-60	Cobbly clay loam, gravelly loam, gravelly clay loam.	GC, GM-GC	A-4, A-6	0-5	35-70	55-75	50-70	40-65	35-50	25-40	5-15

See footnote at end of table.

Table 13.--Engineering Index Properties--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments > 10 inches	Frag-ments 3-10 inches	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO			4	10	40	200		
	In				Pct	Pct					Pct	
102---------- Jenny	0-29	Clay----------	CH, CL	A-7	0	0	95-100	75-95	75-90	70-85	40-60	20-30
	29-38	Clay, silty clay.	CH, CL	A-7	0	0	95-100	75-95	75-90	70-90	40-60	20-30
	38-60	Stratified clay to loam.	CL, CH	A-6, A-7	0	0	95-100	75-95	75-90	50-85	35-55	15-30
103---------- Johnson	0-20	Coarse sandy loam.	SM	A-4	0	0	75-100	75-90	45-70	35-50	20-25	NP-5
	20-42	Loam, clay loam, gravelly loam.	SC, SC-SM, CL-ML, CL	A-4, A-6	0	0-10	75-100	60-95	50-80	35-75	25-35	5-15
	42	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
104---------- Jughandle	0-13	Sandy loam----	SM	A-2	0	0	90-100	85-100	50-70	25-35	20-30	NP-5
	13-29	Coarse sandy loam, sandy loam.	SM	A-2, A-4	0	0	90-100	85-100	50-70	25-40	---	NP
	29-48	Gravelly loamy coarse sand.	SM	A-1, A-2	0	0	75-95	50-75	30-45	15-30	---	NP
	48	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
105*:												
Jughandle----	0-13	Sandy loam----	SM	A-2	0	0	90-100	85-100	50-70	25-35	20-30	NP-5
	13-29	Coarse sandy loam, sandy loam.	SM	A-2, A-4	0	0	90-100	85-100	50-70	25-40	---	NP
	29-48	Gravelly loamy coarse sand.	SM	A-1, A-2	0	0	75-95	50-75	30-45	15-30	---	NP
	48	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
Suttler------	0-4	Loam----------	ML, CL-ML	A-4	0	0	90-100	85-100	80-95	65-75	20-30	NP-10
	4-15	Loam, fine sandy loam, gravelly loam.	ML, SM	A-4	0	0-5	75-100	55-100	45-95	35-75	20-30	NP-5
	15-45	Fine sandy loam, gravelly fine sandy loam.	GM, SM	A-2, A-4, A-1	0	5-15	50-90	50-85	30-70	20-45	20-30	NP-5
	45	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
106---------- Kangas	0-21	Coarse sandy loam.	SM	A-2, A-1	0	0	95-100	80-90	40-50	20-35	20-25	NP-5
	21-40	Fine gravelly loamy coarse sand, fine gravelly loamy sand.	SM	A-1	0	0	70-85	50-70	20-50	15-25	---	NP
	40-60	Fine gravelly coarse sand, very gravelly coarse sand.	SP, SP-SM	A-1	0	0	60-80	35-60	20-40	0-5	---	NP

See footnote at end of table.

Table 13.--Engineering Index Properties--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments > 10 inches	Fragments 3-10 inches	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO			4	10	40	200		
	In				Pct	Pct					Pct	
107----------	0-17	Stony loam----	CL, CL-ML	A-4, A-6	5-10	0-10	80-95	70-90	55-85	50-80	25-35	5-15
Klicker	17-34	Extremely cobbly clay loam, very cobbly silty clay loam, very cobbly clay loam.	CL, SC, GC	A-6, A-2	10-30	25-40	60-85	40-80	35-80	30-60	30-40	10-20
	34	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
108----------	0-8	Silt loam-----	CL-ML	A-4	0	0-5	95-100	90-100	80-100	65-90	25-30	5-10
Klickson	8-17	Cobbly silt loam, cobbly loam, gravelly silt loam.	CL, SC	A-6	0-5	5-40	75-95	70-90	60-85	40-70	30-40	10-15
	17-50	Very cobbly loam, very gravelly loam.	GC, SC	A-2, A-6	0-5	5-40	40-75	35-70	35-65	25-50	30-40	10-15
	50-60	Very cobbly clay, cobbly clay, very cobbly silty clay loam.	CL, CH	A-7	0-5	15-50	75-95	70-90	65-90	50-85	40-55	20-30
109*:												
Klickson-----	0-8	Silt loam-----	CL-ML	A-4	0	0-5	95-100	90-100	80-100	65-90	25-30	5-10
	8-17	Cobbly silt loam, cobbly loam, gravelly silt loam.	CL, SC	A-6	0-5	5-40	75-95	70-90	60-85	40-70	30-40	10-15
	17-50	Very cobbly loam, very gravelly loam.	GC, SC	A-2, A-6	0-5	5-40	40-75	35-70	35-65	25-50	30-40	10-15
	50-60	Very cobbly clay, cobbly clay, very cobbly silty clay loam.	CL, CH	A-7	0-5	15-50	75-95	70-90	65-90	50-85	40-55	20-30
Rock outcrop.												

See footnote at end of table.

Table 13.--Engineering Index Properties--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments > 10 inches	Frag-ments 3-10 inches	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO			4	10	40	200		
	In				Pct	Pct					Pct	
110---------- Langrell	0-10	Loam----------	CL-ML, ML, CL	A-4	0	0	85-100	75-100	65-95	50-75	20-30	NP-10
	10-24	Gravelly loam, cobbly loam.	CL-ML, ML, GM-GC, GM	A-4	0-5	5-30	60-85	55-80	50-70	35-60	20-30	NP-10
	24-30	Very cobbly loam, extremely cobbly loam, very gravelly loam.	GM-GC, GM, GC	A-2, A-1	0-15	25-55	30-60	20-55	15-50	15-35	20-30	NP-10
	30-60	Very stony sandy loam, extremely cobbly sandy loam, extremely gravelly sandy loam.	GM, GW-GM, GP-GM	A-1	0-25	40-55	25-55	15-45	10-30	5-15	20-30	NP-5
111---------- Langrell	0-10	Gravelly loam	GM-GC, GM, SC-SM, SM	A-4	0	0-5	60-85	55-75	50-65	35-50	20-30	NP-10
	10-24	Gravelly loam, cobbly loam.	CL-ML, ML, GM-GC, GM	A-4	0-5	0-30	60-85	55-80	50-70	35-60	20-30	NP-10
	24-30	Very cobbly loam, extremely cobbly loam.	GM-GC, GM, GC	A-2, A-1	0-15	25-55	30-60	20-55	15-50	15-35	20-30	NP-10
	30-60	Very stony sandy loam, extremely cobbly sandy loam.	GM, GW-GM, GP-GM	A-1	0-20	40-55	25-55	15-45	10-30	5-15	20-30	NP-5
112, 113, 114, 115---------- Lankbush	0-12	Sandy loam----	SM, SC-SM	A-2, A-4	0	0	85-100	85-100	45-65	25-40	20-30	NP-10
	12-43	Sandy clay loam, clay loam, loam.	CL-ML, CL, SC-SM, SC	A-2, A-4, A-6	0	0	85-100	85-100	70-100	30-80	25-35	5-15
	43-60	Sand, sandy loam, loamy coarse sand.	SM, SP-SM	A-1, A-2, A-3	0	0	85-100	85-100	45-70	5-30	---	NP
116, 117------ Lanktree	0-10	Loam----------	CL-ML, CL	A-4, A-6	0	0	100	100	85-100	60-90	20-40	5-15
	10-26	Clay loam, clay, sandy clay.	CL	A-6, A-7	0	0	90-100	90-100	85-100	55-95	35-50	15-25
	26-60	Loam, silt loam, sandy loam.	CL-ML, SC-SM	A-4	0	0	90-100	90-100	60-90	35-75	20-30	5-10
118---------- Lanktree	0-10	Clay loam-----	CL	A-6, A-7	0	0	90-100	90-100	90-100	70-80	30-45	10-20
	10-40	Clay loam, clay.	CL	A-6, A-7	0	0	90-100	90-100	90-100	70-95	35-50	15-25
	40-60	Loam----------	CL-ML, CL	A-4	0	0	90-100	90-100	85-95	60-75	20-30	5-10
119---------- Lanktree	0-8	Very cobbly loam.	CL-ML, CL	A-4	0	35-50	80-90	75-85	70-75	50-65	20-30	5-10
	8-38	Clay loam, clay.	CL	A-6, A-7	0	0-5	85-100	85-100	80-100	70-95	35-50	15-25
	38-60	Loam----------	CL-ML, CL	A-4	0	0	90-100	90-100	85-95	60-75	20-30	5-10

See footnote at end of table.

Table 13.--Engineering Index Properties--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments > 10 inches	Frag-ments 3-10 inches	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO			4	10	40	200		
	In				Pct	Pct					Pct	
120*:												
Lanktree-----	0-10	Loam----------	CL-ML, CL	A-4, A-6	0	0	100	100	85-100	60-90	20-40	5-15
	10-36	Clay loam, clay, sandy clay.	CL	A-6, A-7	0	0	90-100	90-100	85-100	55-95	35-50	15-25
	36-60	Loam, silt loam, sandy loam.	CL-ML, SC-SM	A-4	0	0	90-100	90-100	60-90	35-75	20-30	5-10
Lankbush-----	0-12	Sandy loam----	SM, SC-SM	A-2, A-4	0	0	85-100	85-100	45-65	25-40	20-30	NP-10
	12-43	Sandy clay loam, clay loam, loam.	CL-ML, CL, SC-SM, SC	A-2, A-4, A-6	0	0	85-100	85-100	70-100	30-80	25-35	5-15
	43-60	Sand, sandy loam, loamy coarse sand.	SM, SP-SM	A-1, A-2, A-3	0	0	85-100	85-100	45-70	5-30	---	NP
121, 122------	0-4	Sandy loam----	SM	A-2	0	0	90-100	75-95	45-65	25-35	---	NP
Ligget	4-54	Coarse sandy loam, sandy loam, loamy sand.	SM	A-2	0	0	90-100	75-100	45-65	25-35	---	NP
	54-58	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
123, 124, 125-	0-4	Sandy loam----	SM	A-2, A-4	0	0	95-100	95-100	60-70	30-50	25-30	NP-5
Lolalita	4-60	Sandy loam, coarse sandy loam.	SM	A-2, A-4	0	0	95-100	95-100	45-65	25-45	25-30	NP-5
126*:												
Lolalita-----	0-4	Sandy loam----	SM	A-2, A-4	0	0	95-100	95-100	60-70	30-50	25-30	NP-5
	4-60	Sandy loam, coarse sandy loam.	SM	A-2, A-4	0	0	95-100	95-100	45-65	25-45	25-30	NP-5
Glasgow------	0-13	Clay loam-----	CL	A-6, A-7	0	0	100	100	90-100	70-80	35-45	15-20
	13-38	Clay, clay loam.	CH, CL	A-7	0	0	100	100	90-100	70-95	40-60	20-40
	38	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
127*:												
Lolalita-----	0-4	Sandy loam----	SM	A-2, A-4	0	0	95-100	95-100	60-70	30-50	25-30	NP-5
	4-60	Sandy loam, coarse sandy loam.	SM	A-2, A-4	0	0	95-100	95-100	45-65	25-45	25-30	NP-5
Saralegui----	0-3	Sandy loam----	SM	A-2, A-4	0	0	95-100	95-100	60-70	25-40	20-30	NP-5
	3-60	Sandy loam----	SM	A-2, A-4	0	0	95-100	95-100	60-70	30-40	20-30	NP-5
128*, 129*:												
Lorella------	0-6	Very stony clay loam.	GM, ML	A-6, A-7	30-50	10-20	55-95	50-90	50-85	35-70	35-45	10-15
	6-15	Very stony clay loam.	SC, CL	A-7	30-50	5-15	80-95	60-70	55-65	40-55	40-50	15-25
	15-18	Very stony clay.	SC, CH	A-7	30-50	5-15	80-95	60-70	55-70	45-65	50-65	25-40
	18	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---

See footnote at end of table.

Table 13.--Engineering Index Properties--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments > 10 inches	Fragments 3-10 inches	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO			4	10	40	200		
	In				Pct	Pct					Pct	
128*, 129*: Rock outcrop.												
130---------- McDaniel	0-5	Stony loam----	CL-ML	A-4	5-10	0-5	75-90	70-85	65-80	50-75	25-30	5-10
	5-60	Extremely cobbly silty clay loam, extremely gravelly clay loam.	GC	A-2, A-6	5-10	20-55	40-60	20-60	15-55	10-50	35-40	15-20
131*: McDaniel-----	0-5	Very stony loam.	CL-ML	A-4	10-25	5-10	75-80	70-75	65-75	50-65	25-30	5-10
	5-60	Extremely cobbly silty clay loam, extremely gravelly clay loam.	GC	A-2, A-6	5-10	20-55	40-60	20-60	15-55	10-50	35-40	15-20
Rockly-------	0-3	Very stony loam.	GC, GM-GC, SC, SC-SM	A-4, A-6, A-2	15-30	5-15	50-75	45-70	35-65	25-50	25-35	5-15
	3-8	Very gravelly clay loam.	GC	A-2, A-6, A-7	0-5	5-20	25-60	25-55	25-50	20-45	35-45	15-25
	8	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
132*: McDaniel-----	0-5	Very stony loam.	CL-ML	A-4	10-25	5-10	75-80	70-75	65-75	50-65	25-30	5-10
	5-60	Extremely cobbly silty clay loam, extremely gravelly clay loam.	GC	A-2, A-6	5-10	20-55	40-60	20-60	15-55	10-50	35-40	15-20
Starveout----	0-3	Stony loam----	CL	A-6	0	5-10	95-100	90-100	80-95	55-75	30-35	10-15
	3-21	Clay loam, silty clay loam.	CL	A-7	0	0-5	90-100	85-100	75-100	65-85	40-50	15-25
	21-60	Clay loam, clay.	CL, CH	A-7	0	0-5	90-100	85-100	80-100	70-90	40-60	15-30
133, 134, 135- Meland	0-7	Silt loam-----	CL	A-6	0	0	95-100	95-100	90-100	75-85	30-40	10-15
	7-25	Clay loam, gravelly clay loam.	CL	A-7	0	0-10	75-100	70-90	65-85	50-75	40-50	20-25
	25	Unweathered bedrock.	---	---	---	---	---	---	---	---	40-50	20-25
136---------- Meland	0-7	Very stony loam.	ML	A-4	10-15	20-30	75-85	70-80	65-75	50-60	25-35	NP-10
	7-25	Clay loam, cobbly clay loam.	CL	A-6, A-7	0-5	0-25	70-95	65-90	60-80	50-70	35-45	15-20
	25	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---

See footnote at end of table.

Table 13.--Engineering Index Properties--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments > 10 inches	Fragments 3-10 inches	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO			4	10	40	200		
	In				Pct	Pct					Pct	
137*, 138*:												
Meland-------	0-7	Stony loam----	ML	A-4	5-10	5-20	75-90	70-80	65-75	50-60	25-35	NP-10
	7-25	Clay loam, cobbly clay loam.	CL	A-6, A-7	0-5	0-25	70-95	65-90	60-80	50-70	35-45	15-20
	25	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
Riggins------	0-4	Extremely stony loam.	GM, SM	A-4	20-35	25-45	65-80	60-75	50-70	35-50	25-35	NP-10
	4-19	Very cobbly clay loam.	GC, CL, SC	A-6, A-7	0-5	30-70	55-85	50-80	45-75	35-55	35-50	15-25
	19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
139----------	0-12	Loam----------	CL-ML, CL	A-4, A-6	0	0	100	100	85-95	60-75	25-40	5-15
Melton	12-16	Loam----------	CL-ML, CL	A-4, A-6	0	0	100	100	85-95	60-75	25-35	5-15
	16-33	Gravelly sandy loam.	GM, SM	A-1	0	0-5	55-75	50-70	35-50	15-25	20-30	NP-5
	33-60	Cobbly sand, cobbly loamy sand, very cobbly loamy sand.	SM, SP-SM	A-1	0-5	10-35	75-85	70-80	35-50	5-25	---	NP
140*:												
Melton-------	0-12	Loam----------	CL-ML, CL	A-4, A-6	0	0	100	100	85-95	60-75	25-40	5-15
	12-16	Loam----------	CL-ML, CL	A-4, A-6	0	0	100	100	85-95	60-75	25-35	5-15
	16-33	Gravelly sandy loam.	GM, SM	A-1	0	0-5	55-75	50-70	35-50	15-25	20-30	NP-5
	33-60	Cobbly sand, cobbly loamy sand, very cobbly loamy sand.	SM, SP-SM	A-1	0-5	10-35	75-85	70-80	35-50	5-25	---	NP
Roseberry----	0-26	Loam----------	ML	A-4	0	0	95-100	90-100	60-90	50-75	20-25	NP-5
	26-40	Loamy coarse sand, loamy sand, sandy loam.	SM	A-2	0	0	90-100	75-100	45-65	25-30	20-25	NP-5
	40-55	Very fine sandy loam, fine sandy loam, sandy loam.	ML	A-4	0	0	90-100	90-100	75-85	50-60	20-25	NP-5
	55-60	Gravelly sand	SM	A-1	0	0	80-90	75-85	45-55	5-15	---	NP
141, 142, 143, 144, 145----- Midvale	0-10	Silty clay loam.	CL	A-6, A-7	0	0	100	100	95-100	85-95	35-45	15-20
	10-30	Clay loam, clay, silty clay.	CL, CH	A-7	0	0	100	100	90-100	70-95	40-60	20-35
	30-56	Loam----------	ML	A-4, A-6, A-7	0	0	100	100	85-95	60-75	30-45	5-15
	56-60	Silt loam, very fine sandy loam.	CL-ML	A-4	0	0	100	100	85-95	50-75	20-30	5-10

See footnote at end of table.

Table 13.--Engineering Index Properties--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments	Frag-ments	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	> 10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
146*:												
Midvale------	0-10	Silty clay loam.	CL	A-6, A-7	0	0	100	100	95-100	85-95	35-45	15-20
	10-30	Clay loam, clay, silty clay.	CL, CH	A-7	0	0	100	100	90-100	70-95	40-60	20-35
	30-56	Loam----------	ML	A-4, A-6, A-7	0	0	100	100	85-95	60-75	30-45	5-15
	56-60	Silt loam, very fine sandy loam.	CL-ML	A-4	0	0	100	100	85-95	50-75	20-30	5-10
Demoss-------	0-5	Loam----------	CL-ML, CL	A-4, A-6	0	0	100	100	85-95	60-75	25-35	5-15
	5-9	Clay loam-----	CL	A-6, A-7	0	0	100	100	90-100	70-80	35-45	15-20
	9-12	Clay, clay loam.	CL, CH	A-7	0	0	100	100	90-100	75-95	45-55	20-30
	12-17	Cemented------	---	---	---	---	---	---	---	---	---	---
	17	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
147*:												
Molly--------	0-11	Silt loam-----	ML	A-4	0	0	90-100	85-100	75-95	55-85	30-40	NP-5
	11-26	Sandy loam, coarse sandy loam.	SM	A-2	0	0	90-100	85-100	50-75	20-35	---	NP
	26-40	Gravelly sandy loam, gravelly coarse sandy loam.	SM, GM	A-1	0	5-10	55-75	50-70	35-50	15-25	---	NP
	40-60	Very gravelly sandy loam, very gravelly coarse sandy loam.	GM, SM	A-1	0-5	25-35	30-60	30-50	15-35	10-20	---	NP
	60	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
Littlesalmon-	0-13	Loam----------	ML	A-4	0	0	95-100	85-100	65-95	50-75	25-40	NP-10
	13-20	Cobbly sandy loam.	SC-SM, SM	A-2	0-5	20-30	75-85	70-80	40-50	20-30	20-30	NP-10
	20-60	Very cobbly loamy coarse sand, extremely cobbly loamy coarse sand.	GP-GM, SP-SM, SM, GM	A-1	0-10	40-85	25-75	15-65	10-45	5-20	---	NP
	60	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---

See footnote at end of table.

Table 13.--Engineering Index Properties--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments > 10 inches	Fragments 3-10 inches	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO			4	10	40	200		
	In				Pct	Pct					Pct	
148*:												
Molly--------	0-11	Silt loam-----	ML	A-4	0	0	90-100	85-100	75-95	55-85	30-40	NP-5
	11-26	Sandy loam, coarse sandy loam.	SM	A-2	0	0	90-100	85-100	50-75	20-35	---	NP
	26-40	Gravelly sandy loam, gravelly coarse sandy loam.	SM, GM	A-1	0	5-10	55-75	50-70	35-50	15-25	---	NP
	40-60	Very gravelly sandy loam, very gravelly coarse sandy loam.	GM, SM	A-1	0-5	25-35	30-60	30-50	15-35	10-20	---	NP
	60	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
Littlesalmon-	0-13	Loam----------	ML	A-4	0	0	95-100	85-100	65-95	50-75	25-40	NP-10
	13-20	Cobbly sandy loam.	SC-SM, SM	A-2	0-5	20-30	75-85	70-80	40-50	20-30	20-30	NP-10
	20-60	Very cobbly loamy coarse sand, extremely cobbly loamy coarse sand.	GP-GM, SP-SM, SM, GM	A-1	0-10	40-85	25-75	15-65	10-45	5-20	---	NP
	60	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
Rock outcrop.												
149----------	0-20	Coarse sandy loam.	SM	A-4	0	0-5	90-100	85-100	60-85	35-50	20-25	NP-5
Moonstone	20-34	Coarse sandy loam, gravelly coarse sandy loam.	SM	A-1, A-2, A-4	0	0-5	70-95	65-90	45-70	20-50	20-25	NP-5
	34	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
150----------	0-15	Fine sandy loam.	ML, CL-ML, SM, SC-SM	A-4	0	0	90-100	90-100	65-85	35-55	20-30	NP-10
Moulton	15-35	Fine sandy loam, sandy loam.	ML, CL-ML, SM, SC-SM	A-4	0	0	90-100	90-100	75-90	40-60	20-30	NP-10
	35-60	Very gravelly loamy sand, very gravelly sand.	GP, GP-GM, GM, SP-SM	A-1	0	0	30-60	30-50	15-35	0-15	---	NP
151----------	0-12	Loam----------	ML, CL-ML	A-4	0	0	90-100	90-100	75-95	55-75	20-30	NP-10
Moulton	12-26	Fine sandy loam, sandy loam.	ML, CL-ML, SM, SC-SM	A-4	0	0	90-100	90-100	75-90	40-60	20-30	NP-10
	26-60	Very gravelly loamy sand, very gravelly sand.	GP, GP-GM, GM, SP-SM	A-1	0	0	30-60	30-50	15-35	0-15	---	NP

See footnote at end of table.

Table 13.--Engineering Index Properties--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments > 10 inches	Frag-ments 3-10 inches	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO			4	10	40	200		
	In				Pct	Pct					Pct	
152*:												
Moulton------	0-15	Fine sandy loam.	ML, CL-ML, SM, SC-SM	A-4	0	0	90-100	90-100	65-85	35-55	20-30	NP-10
	15-35	Fine sandy loam, sandy loam.	ML, CL-ML, SM, SC-SM	A-4	0	0	90-100	90-100	75-90	40-60	20-30	NP-10
	35-60	Very gravelly loamy sand, very gravelly sand.	GP, GP-GM, GM, SP-SM	A-1	0	0	30-60	30-50	15-35	0-15	---	NP
Falk---------	0-10	Fine sandy loam.	SM, SC-SM	A-4	0	0	100	100	70-85	40-50	20-30	NP-10
	10-38	Fine sandy loam, sandy loam.	SM, SC-SM	A-2, A-4	0	0	90-100	80-100	45-85	25-50	20-30	NP-10
	38-60	Very gravelly coarse sandy loam, very gravelly sand.	GP, GP-GM, GM	A-1	0	0-5	35-50	35-50	15-35	0-20	---	NP
153*:												
Mulett-------	0-2	Very stony loam.	CL-ML, CL, SC, SC-SM	A-4	20-25	20-50	75-95	65-85	60-75	40-55	20-30	5-10
	2-12	Very stony loam, very stony sandy loam, extremely stony loam.	CL, GC, SC	A-6	25-45	25-35	65-90	60-85	55-75	35-60	25-35	10-20
	12	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
Macksy-------	0-4	Extremely stony loam.	GM-GC, GM	A-1, A-2	30-50	0-40	40-65	35-60	30-50	20-35	20-30	NP-10
	4-24	Very stony clay loam, very stony loam, extremely stony loam.	GC	A-2, A-6	20-45	0-30	40-60	40-60	30-50	25-45	25-40	10-20
	24	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
154*:												
Nazaton------	0-16	Gravelly loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0	0-15	75-85	50-80	45-80	35-70	25-35	5-15
	16-60	Extremely gravelly loam, extremely gravelly sandy loam, very cobbly loam.	GM-GC, GC	A-2	0-5	0-50	35-60	30-55	25-55	10-35	25-35	5-15
Naz----------	0-23	Loam----------	ML	A-4	0	0-5	90-100	85-95	65-80	50-65	20-25	NP-5
	23-60	Coarse sandy loam.	SM	A-2, A-4	0	0-5	90-100	75-90	45-65	25-40	---	NP

See footnote at end of table.

Table 13.--Engineering Index Properties--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments > 10 inches	Frag-ments 3-10 inches	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO			4	10	40	200		
	In				Pct	Pct					Pct	
155, 156, 157-	0-23	Clay loam-----	CL	A-7	0	0	100	100	90-100	70-85	40-50	20-30
Newell	23-34	Clay loam, silty clay loam.	CL	A-7	0	0	95-100	95-100	90-100	70-85	40-50	20-30
	34-60	Silty clay loam, clay loam.	CL	A-7	0	0	95-100	95-100	90-100	70-85	40-50	20-30
158----------	0-12	Stony clay loam.	CL-ML, CL	A-4, A-6	10-15	0-5	95-100	95-100	85-100	70-80	25-40	5-15
Newell	12-39	Stony clay loam, stony silty clay loam.	CL, CH	A-7	5-15	0-10	95-100	95-100	90-100	70-90	40-60	20-35
	39-60	Stony loam, stony clay loam.	ML, CL-ML	A-4	5-15	0-10	95-100	95-100	85-100	60-90	25-40	5-20
159----------	0-8	Sandy loam----	SM	A-2, A-4	0	0	95-100	90-100	55-85	25-50	20-25	NP-5
Notus	8-60	Stratified gravelly loamy sand to very gravelly sand.	GP-GM	A-1	0	0-25	30-50	25-45	15-30	5-10	---	NP
160----------	0-12	Silt loam-----	ML	A-4	0	0	100	100	90-100	85-90	30-40	5-10
Nyssaton	12-60	Silt loam-----	ML	A-4	0	0	100	100	90-100	85-90	30-40	5-10
161*:												
Odermott-----	0-6	Clay loam-----	CL	A-6	0	0-5	100	95-100	85-100	60-80	35-40	15-20
	6-34	Clay, clay loam, sandy clay loam.	CL, CH	A-7	0	0	90-100	90-100	80-100	60-80	45-60	20-35
	34-60	Stratified cobbly sand to gravel.	GP	A-1	0-5	0-30	15-45	5-40	0-30	0-10	---	NP
Appledellia--	0-10	Clay loam-----	CL	A-6	0	0	95-100	95-100	85-100	70-80	30-40	10-20
	10-32	Clay, gravelly clay.	CL, CH	A-7	0	0-10	70-95	65-90	60-90	50-80	45-65	25-40
	32-33	Indurated-----	---	---	---	---	---	---	---	---	---	---
	33-60	Extremely gravelly sand, extremely gravelly coarse sand.	GP	A-1	0	5-45	10-25	10-25	5-20	0-5	---	NP
162----------	0-4	Shaly loam----	SC-SM, SC	A-4, A-6	0	0-10	75-90	55-75	50-65	40-50	20-35	5-15
Oldsferry	4-28	Very shaly loam.	SC-SM, GM-GC, SC, GC	A-2	0	0-20	40-60	25-50	20-45	15-30	20-35	5-15
	28	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
163----------	0-6	Silt loam-----	ML	A-4	0	0	100	100	95-100	75-100	20-25	NP-5
Onyx	6-60	Silt loam, very fine sandy loam.	ML	A-4	0	0	100	100	95-100	80-90	20-30	NP-5

See footnote at end of table.

Table 13.--Engineering Index Properties--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments > 10 inches	Frag-ments 3-10 inches	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO			4	10	40	200		
	In				Pct	Pct					Pct	
164, 165, 166, 167, 168----- Owyhee	0-12	Silt loam-----	ML	A-4	0	0	100	100	90-100	75-90	20-30	NP-5
	12-60	Silt loam-----	ML	A-4	0	0	100	100	90-100	75-90	20-30	NP-5
169----------- Paniogue	0-12	Loam----------	ML	A-4	0	0	95-100	90-100	70-95	55-80	25-35	NP-10
	12-32	Loam, silt loam, very fine sandy loam.	ML	A-4	0	0-5	80-100	75-95	55-90	50-75	25-35	NP-10
	32-60	Stratified sand to very gravelly coarse sand.	GP, SP, SP-SM, GP-GM	A-1	0	0-10	40-80	30-70	15-40	0-10	---	NP
170, 171------ Payette	0-10	Coarse sandy loam.	SM	A-2, A-4	0	0	90-100	90-100	55-70	25-40	---	NP
	10-26	Coarse sandy loam, loam, gravelly coarse sandy loam.	GM, GM-GC, ML, CL-ML	A-1, A-2, A-4	0	0	60-100	60-100	35-95	15-75	20-30	NP-10
	26-60	Coarse sand, loamy sand.	SP-SM, SM	A-1, A-2, A-3	0	0	80-100	80-100	40-75	5-30	---	NP
172*: Payette------	0-10	Coarse sandy loam.	SM	A-2, A-4	0	0	90-100	90-100	55-70	25-40	---	NP
	10-26	Coarse sandy loam, loam, gravelly coarse sandy loam.	GM, GM-GC, ML, CL-ML	A-1, A-2, A-4	0	0	60-100	60-100	35-95	15-75	20-30	NP-10
	26-60	Coarse sand, loamy sand.	SP-SM, SM	A-1, A-2, A-3	0	0	80-100	80-100	40-75	5-30	---	NP
Van Dusen----	0-14	Loam----------	ML, CL-ML	A-4	0	0-5	80-100	75-100	65-100	50-90	20-30	NP-10
	14-20	Loam----------	CL-ML, CL	A-4, A-6	0	0-5	95-100	95-100	85-95	60-75	25-40	5-15
	20-32	Sandy clay loam, clay loam, gravelly loam.	CL, SC	A-6	0	0-5	75-100	60-100	50-100	35-75	25-40	10-20
	32-60	Loam, sandy loam.	ML, CL-ML, SM, SC-SM	A-2, A-4	0	0-5	95-100	95-100	65-95	30-75	20-30	NP-10
173*, 174*, 175*: Power-------	0-12	Silt loam-----	CL-ML, ML	A-4	0	0	100	100	90-100	70-90	20-30	NP-10
	12-31	Silty clay loam, loam, silt loam.	CL-ML, CL	A-4, A-6	0	0	100	100	95-100	80-95	25-35	5-15
	31-60	Loam, silt loam, very fine sandy loam.	CL-ML	A-4	0	0	95-100	90-100	90-100	60-85	20-30	5-10

See footnote at end of table.

Table 13.--Engineering Index Properties--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments > 10 inches	Fragments 3-10 inches	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO			4	10	40	200		
	In				Pct	Pct					Pct	
173*, 174*, 175*:												
Purdam------	0-12	Silt loam-----	CL-ML, ML	A-4	0	0	100	100	90-100	70-90	25-35	5-10
	12-22	Silty clay loam, silt loam.	CL	A-6	0	0	100	100	90-100	70-95	30-40	10-20
	22-27	Silt loam, loam.	CL-ML, ML	A-4	0	0	90-100	85-100	80-100	60-90	25-35	5-10
	27-35	Cemented------	---	---	---	---	---	---	---	---	---	---
	35-60	Stratified loam to very gravelly sand.	SM	A-1	0	0-10	70-85	40-80	25-45	10-20	20-30	NP-5
176, 177, 178-Riggins	0-4	Extremely stony loam.	GM, SM	A-4	20-35	25-45	65-80	60-75	50-70	35-50	25-35	NP-10
	4-19	Very cobbly clay loam.	GC, CL, SC	A-6, A-7	0-5	30-70	55-85	50-80	45-75	35-55	35-50	15-25
	19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
179. Riverwash												
180*: Rock outcrop.												
Bakeoven-----	0-3	Extremely stony loam.	GM, SM	A-4	25-40	20-30	65-80	60-75	50-70	35-50	25-35	NP-10
	3-9	Very gravelly clay loam, very cobbly loam, very gravelly loam.	GM, GC	A-4, A-6	5-15	15-40	50-65	45-60	40-55	35-50	30-40	5-15
	9	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
181---------- Rockly	0-2	Very stony loam.	GC, GM-GC, SC, SC-SM	A-4, A-6, A-2	15-30	5-15	50-75	45-70	35-65	25-50	25-35	5-15
	2-8	Very gravelly clay loam.	GC	A-2, A-6, A-7	0-5	5-20	25-60	25-55	25-50	20-45	35-45	15-25
	8	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
182*: Rockly-------	0-3	Extremely stony loam.	GM, SM	A-2, A-4	20-40	10-20	50-75	40-70	35-65	25-50	25-35	NP-5
	3-8	Very cobbly clay loam, very gravelly clay loam, very stony loam.	GM, SM	A-2, A-4	15-30	15-30	50-75	40-70	30-70	25-50	30-40	5-10
	8	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---

See footnote at end of table.

Table 13.--Engineering Index Properties--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments	Fragments	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	> 10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
182*:												
Riggins------	0-4	Extremely stony loam.	GM, SM	A-4	20-35	25-45	65-80	60-75	50-70	35-50	25-35	NP-10
	4-19	Very cobbly clay loam.	GC, CL, SC	A-6, A-7	0-5	30-70	55-85	50-80	45-75	35-55	35-50	15-25
	19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
183*:												
Rockly-------	0-3	Extremely stony loam.	GM, SM	A-2, A-4	20-30	20-30	50-75	45-70	35-65	25-50	25-30	NP-5
	3-8	Very cobbly clay loam, extremely gravelly loam, extremely cobbly clay loam.	GM, GC	A-2, A-6, A-4	0-5	30-55	30-65	25-60	25-50	20-40	30-40	5-15
	8	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
Riggins------	0-4	Extremely stony loam.	GM, SM	A-4	20-35	25-45	65-80	60-75	50-70	35-50	25-35	NP-10
	4-19	Very cobbly clay loam.	GC, CL, SC	A-6, A-7	0-5	30-70	55-85	50-80	45-75	35-55	35-50	15-25
	19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
184*:												
Rockly-------	0-3	Very stony loam.	GC, GM-GC, SC, SC-SM	A-4, A-6, A-2	15-30	5-15	50-75	45-70	35-65	25-50	25-35	5-15
	3-8	Very gravelly clay loam.	GC	A-2, A-6, A-7	0-5	5-20	25-60	25-55	25-50	20-45	35-45	15-25
	8	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
Rock outcrop.												
185*:												
Rockly-------	0-3	Very stony loam.	GC, GM-GC, SC, SC-SM	A-4, A-6, A-2	15-30	5-15	50-75	45-70	35-65	25-50	25-35	5-15
	3-8	Very gravelly clay loam.	GC	A-2, A-6, A-7	0-5	5-20	25-60	25-55	25-50	20-45	35-45	15-25
	8	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
Starveout----	0-3	Loam----------	CL	A-6	0	0-5	95-100	95-100	85-95	60-75	30-35	10-15
	3-21	Clay loam, silty clay loam.	CL	A-7	0	0-5	90-100	85-100	75-100	65-85	40-50	15-25
	21-60	Clay loam, clay.	CL, CH	A-7	0	0-5	90-100	85-100	80-100	70-90	40-60	15-30

See footnote at end of table.

Table 13.--Engineering Index Properties--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments > 10 inches	Frag-ments 3-10 inches	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO			4	10	40	200		
	In				Pct	Pct					Pct	
185*:												
McDaniel-----	0-5	Very stony loam.	CL-ML	A-4	10-25	5-10	75-80	70-75	65-75	50-65	25-30	5-10
	5-60	Extremely cobbly silty clay loam, extremely gravelly clay loam.	GC	A-2, A-6	5-10	20-55	40-60	20-60	15-55	10-50	35-40	15-20
186-----------	0-26	Loam----------	ML	A-4	0	0	95-100	90-100	60-90	50-75	20-25	NP-5
Roseberry	26-40	Loamy coarse sand, loamy sand, sandy loam.	SM	A-2	0	0	90-100	75-100	45-65	25-30	20-25	NP-5
	40-55	Very fine sandy loam, fine sandy loam, sandy loam.	ML	A-4	0	0	90-100	90-100	75-85	50-60	20-25	NP-5
	55-60	Gravelly sand	SM	A-1	0	0	80-90	75-85	45-55	5-15	---	NP
187*, 188*:												
Shellrock----	0-10	Loamy coarse sand.	SM	A-1	0	0	90-100	85-95	30-50	15-25	---	NP
	10-31	Loamy coarse sand.	SM	A-1	0	0	90-100	85-95	30-50	15-25	---	NP
	31-42	Gravelly coarse sand, gravelly loamy coarse sand.	SP-SM	A-1	0	5-10	90-100	70-85	15-30	5-10	---	NP
	42	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
Rock outcrop.												
189-----------	0-21	Loam----------	CL-ML, CL	A-4, A-6	0	0	100	100	85-95	60-75	25-35	5-15
Shoepeg	21-48	Loam, silt loam, clay loam.	CL	A-6	0	0	100	100	85-100	60-85	25-40	10-20
	48-60	Gravelly sandy loam, loamy coarse sand, sandy loam.	SM, SC-SM	A-1, A-2, A-4	0	0-5	60-95	50-95	20-80	10-50	15-30	NP-10
190-----------	0-26	Silty clay loam.	CL	A-6	0	0	100	100	95-100	85-95	30-40	10-20
Shoepeg	26-60	Loam, silt loam, clay loam.	CL	A-6	0	0	100	100	85-100	60-85	25-40	10-20
191*:												
Starveout----	0-3	Loam----------	CL	A-6	0	0-5	95-100	95-100	85-95	60-75	30-35	10-15
	3-21	Clay loam, silty clay loam.	CL	A-7	0	0-5	90-100	85-100	75-100	65-85	40-50	15-25
	21-60	Clay loam, clay.	CL, CH	A-7	0	0-5	90-100	85-100	80-100	70-90	40-60	15-30

See footnote at end of table.

Table 13.--Engineering Index Properties--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments > 10 inches	Frag-ments 3-10 inches	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO			4	10	40	200		
	In				Pct	Pct					Pct	
191*:												
Gwin----------	0-5	Very stony loam.	GM, GM-GC	A-4	20-40	10-40	55-75	50-70	45-65	35-50	20-30	NP-10
	5-12	Extremely cobbly loam, very cobbly loam.	GC	A-2	0-10	35-60	30-55	25-50	20-45	20-35	30-40	10-20
	12-20	Extremely cobbly clay loam, extremely stony clay loam.	GC	A-2, A-7	25-40	15-30	30-55	25-50	25-45	20-40	40-50	20-25
	20	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
McDaniel-----	0-5	Very stony loam.	CL-ML	A-4	10-25	5-10	75-80	70-75	65-75	50-65	25-30	5-10
	5-60	Extremely cobbly silty clay loam, extremely gravelly clay loam.	GC	A-2, A-6	5-10	20-55	40-60	20-60	15-55	10-50	35-40	15-20
192----------	0-18	Loam----------	ML	A-4	0	0	95-100	85-90	75-85	55-70	30-40	5-10
Sudpeak	18-28	Clay loam-----	CL	A-7	0	0	95-100	90-95	85-95	65-75	40-50	20-30
	28-60	Silty clay loam, clay.	CL, CH	A-7	0	0	95-100	90-95	85-95	70-90	40-65	20-40
193----------	0-24	Loam----------	ML	A-4	0	0-5	100	100	85-100	60-90	30-35	5-10
Swede	24-52	Silty clay loam, clay loam.	CL	A-6	0	0-5	100	100	95-100	60-80	30-40	10-20
	52-60	Gravelly silty clay loam, gravelly clay loam.	CL	A-6	0	0-5	65-80	60-75	55-75	50-65	30-40	10-20
194----------	0-3	Loam----------	CL, CL-ML	A-4, A-6	0	0-5	95-100	90-100	75-95	55-75	25-35	5-15
Tamred	3-7	Loam, gravelly loam.	CL, CL-ML	A-4, A-6	0	0-10	65-90	60-80	55-75	50-70	25-35	5-15
	7-21	Extremely gravelly clay loam, extremely cobbly clay loam.	GC, CL, SC	A-6, A-7	0-20	50-85	55-85	50-80	45-75	35-55	35-50	15-25
	21	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
195----------	0-5	Very cobbly loam.	GM-GC, GC	A-4, A-6	0-5	35-65	65-75	55-70	50-65	35-50	25-35	5-15
Ticanot	5-15	Very cobbly clay loam, very cobbly clay.	CL, CH	A-7	0-5	45-65	75-85	70-80	65-75	50-70	45-55	25-35
	15	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---

See footnote at end of table.

Table 13.--Engineering Index Properties--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments > 10 inches	Fragments 3-10 inches	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO			4	10	40	200		
	In				Pct	Pct					Pct	
196*, 197*, 198*:												
Tindahay----	0-12	Loamy coarse sand.	SM	A-1, A-2	0	0-5	95-100	90-100	45-70	15-30	---	NP
	12-17	Sandy loam----	SM, SC-SM	A-2, A-4	0	0-5	95-100	90-100	35-70	25-40	20-30	NP-10
	17-60	Coarse sand, fine gravelly loamy coarse sand, loamy coarse sand.	SP-SM, SM	A-1	0	0-5	75-95	60-95	30-50	5-25	---	NP
Cashmere----	0-11	Sandy loam----	SM	A-4	0	0	95-100	90-100	80-90	40-50	---	NP
	11-60	Fine sandy loam, coarse sandy loam, sandy loam.	SM	A-2, A-4	0	0-5	80-100	80-100	50-85	25-40	15-20	NP-5
199---------- Typic Xerofluvents	0-10	Extremely cobbly sand.	GP, SP	A-1	20-40	10-70	25-55	20-50	5-25	0-5	---	NP
	10-60	Stratified gravelly sand to extremely cobbly coarse sand.	GP	A-1	10-25	0-85	10-60	10-55	0-30	0-5	---	NP
200*:												
Van Dusen----	0-14	Loam----------	ML, CL-ML	A-4	0	0-5	80-100	75-100	65-100	50-90	20-30	NP-10
	14-20	Loam----------	CL-ML, CL	A-4, A-6	0	0-5	95-100	95-100	85-95	60-75	25-40	5-15
	20-32	Sandy clay loam, clay loam, gravelly loam.	CL, SC	A-6	0	0-5	75-100	60-100	50-100	35-75	25-40	10-20
	32-60	Loam, sandy loam.	ML, CL-ML, SM, SC-SM	A-2, A-4	0	0-5	95-100	95-100	65-95	30-75	20-30	NP-10
Haw----------	0-17	Silt loam-----	ML, CL-ML	A-4	0	0	100	95-100	85-100	60-90	20-30	NP-10
	17-38	Clay loam, sandy clay loam, loam.	CL, SC	A-6	0	0	100	95-100	70-100	35-80	30-40	10-20
	38-60	Coarse sandy loam, loam, sandy loam.	SM, ML, SC, CL	A-2, A-4, A-6	0	0-5	100	95-100	60-95	30-75	20-35	NP-15
201---------- Wapshilla	0-10	Loam----------	ML	A-4	0	0-5	85-100	75-90	65-80	50-65	25-35	NP-10
	10-21	Gravelly loam	GM-GC, GC	A-4, A-6	0	0-15	60-70	50-70	45-60	35-45	25-35	5-15
	21-60	Very gravelly loam, very gravelly clay loam.	GC	A-2, A-6	0-5	0-10	40-60	35-50	30-45	20-45	30-40	10-20

* See description of the map unit for composition and behavior characteristics of the map unit.

Table 14.--Physical and Chemical Properties of the Soils

(The symbol < means less than; > means more than. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Organic matter" apply only to the surface layer. Absence of an entry indicates that data were not available or were not estimated)

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Salinity	Shrink-swell potential	Erosion factors		Wind erodibility group	Organic matter
									K	T		
	In	Pct	G/cc	In/hr	In/in	pH	mmhos/cm					Pct
1----------	0-4	10-25	1.40-1.60	0.6-2.0	0.17-0.20	7.4-8.4	<2	Low-------	0.49	5	5	1-2
Abo	4-11	27-35	1.40-1.60	0.2-0.6	0.17-0.20	7.4-8.4	<2	Moderate	0.49			
	11-60	18-27	1.40-1.60	0.2-0.6	0.17-0.20	7.9-8.4	<2	Low-------	0.32			
2, 3----------	0-4	60-70	1.00-1.25	<0.06	0.14-0.16	6.6-8.4	<2	High------	0.24	5	4	1-2
Agerdelly	4-38	60-80	1.25-1.50	<0.06	0.14-0.16	7.4-8.4	<2	High------	0.24			
	38-60	60-80	1.25-1.50	<0.06	0.14-0.16	7.4-8.4	<2	High------	0.24			
4*, 5*:												
Agerdelly-------	0-4	60-70	1.00-1.25	<0.06	0.14-0.16	6.6-8.4	<2	High------	0.24	5	4	1-2
	4-38	60-80	1.25-1.50	<0.06	0.14-0.16	7.4-8.4	<2	High------	0.24			
	38-60	60-80	1.25-1.50	<0.06	0.14-0.16	7.4-8.4	<2	High------	0.24			
Devnot----------	0-4	27-35	1.15-1.35	0.2-0.6	0.12-0.16	6.1-7.8	<2	Moderate	0.15	1	8	1-3
	4-19	40-60	1.35-1.45	0.06-0.2	0.10-0.13	6.1-7.8	<2	High------	0.24			
	19	---	---	---	---	---	---	----------	----			
6, 7----------	0-10	18-27	1.25-1.45	0.6-2.0	0.16-0.18	6.6-7.3	<2	Low-------	0.32	2	5	1-3
Appledellia	10-18	35-45	1.40-1.60	0.2-0.6	0.14-0.19	6.6-7.3	<2	Moderate	0.43			
	18-32	40-50	1.40-1.50	0.06-0.2	0.10-0.16	6.6-7.3	<2	High------	0.20			
	32-33	---	---	---	---	---	---	----------	----			
	33-60	0-2	1.50-1.70	>20	---	6.6-8.4	<2	Low-------	0.02			
8----------	0-10	27-40	1.30-1.50	0.2-0.6	0.19-0.21	6.6-7.3	<2	Moderate	0.24	2	6	1-3
Appledellia	10-18	35-45	1.40-1.60	0.2-0.6	0.14-0.19	6.6-7.3	<2	Moderate	0.43			
	18-32	40-50	1.40-1.50	0.06-0.2	0.10-0.16	6.6-7.3	<2	High------	0.20			
	32-33	---	---	---	---	---	---	----------	----			
	33-60	0-2	1.50-1.70	>20	---	6.6-8.4	<2	Low-------	0.02			
9*:												
Appledellia-----	0-10	18-27	1.25-1.45	0.6-2.0	0.16-0.18	6.6-7.3	<2	Low-------	0.32	2	5	1-3
	10-18	35-45	1.40-1.60	0.2-0.6	0.14-0.19	6.6-7.3	<2	Moderate	0.43			
	18-32	40-50	1.40-1.50	0.06-0.2	0.10-0.16	6.6-7.3	<2	High------	0.20			
	32-33	---	---	---	---	---	---	----------	----			
	33-60	0-2	1.50-1.70	>20	---	6.6-8.4	<2	Low-------	0.02			
Appleshall------	0-6	27-32	1.25-1.45	0.6-2.0	0.13-0.15	6.6-7.3	<2	Moderate	0.17	1	7	1-2
	6-12	32-35	1.25-1.45	0.06-0.2	0.08-0.11	6.6-7.3	<2	Moderate	0.15			
	12-13	---	---	---	---	---	---	----------	----			
	13-60	0-2	1.40-1.60	>20	---	6.6-7.8	<2	Low-------	0.02			
10*:												
Appledellia-----	0-10	18-27	1.25-1.45	0.6-2.0	0.16-0.18	6.6-7.3	<2	Low-------	0.32	2	5	1-3
	10-32	40-50	1.40-1.50	0.06-0.2	0.10-0.16	6.6-7.3	<2	High------	0.20			
	32-33	---	---	---	---	---	---	----------	----			
	33-60	0-2	1.50-1.70	>20	---	6.6-8.4	<2	Low-------	0.02			
Appleshall------	0-6	27-32	1.25-1.45	0.6-2.0	0.13-0.15	6.6-7.3	<2	Moderate	0.17	1	7	1-2
	6-12	32-35	1.25-1.45	0.06-0.2	0.08-0.11	6.6-7.3	<2	Moderate	0.15			
	12-13	---	---	---	---	---	---	----------	----			
	13-60	0-2	1.40-1.60	>20	---	6.6-7.8	<2	Low-------	0.02			

See footnote at end of table.

Table 14.--Physical and Chemical Properties of the Soils--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Salinity	Shrink-swell potential	Erosion factors K	Erosion factors T	Wind erodibility group	Organic matter
	In	Pct	G/cc	In/hr	In/in	pH	mmhos/cm					Pct
11*, 12*:												
Appledallia-----	0-10	27-40	1.30-1.50	0.2-0.6	0.19-0.21	6.6-7.3	<2	Moderate	0.24	2	6	1-3
	10-32	40-50	1.40-1.50	0.06-0.2	0.10-0.16	6.6-7.3	<2	High------	0.20			
	32-33	---	---	---	---	---	---	----------	----			
	33-60	0-2	1.50-1.70	>20	---	6.6-8.4	<2	Low-------	0.02			
Odermott--------	0-15	27-35	1.40-1.50	0.2-0.6	0.16-0.20	6.1-6.5	<2	Moderate	0.24	2	6	3-5
	15-34	30-55	1.40-1.50	0.2-0.6	0.14-0.21	6.1-6.5	<2	High------	0.15			
	34-60	0-7	1.50-1.70	>20	0.01-0.04	6.1-6.5	<2	Low-------	0.10			
13*:												
Bakeoven--------	0-3	15-25	1.25-1.35	0.2-0.6	0.06-0.09	6.1-7.8	<2	Low-------	0.05	1	8	1-3
	3-9	18-33	1.30-1.40	0.2-0.6	0.05-0.14	6.6-7.8	<2	Low-------	0.10			
	9	---	---	---	---	---	---	----------	----			
Reywat----------	0-6	8-18	1.35-1.55	0.6-2.0	0.09-0.13	6.6-7.8	<2	Low-------	0.15	1	8	1-3
	6-19	24-35	1.35-1.55	0.2-0.6	0.10-0.14	6.6-8.4	<2	Moderate	0.15			
	19	---	---	---	---	---	---	----------	----			
14*:												
Bakeoven--------	0-3	15-25	1.25-1.35	0.2-0.6	0.06-0.09	6.1-7.8	<2	Low-------	0.05	1	8	1-3
	3-9	18-33	1.30-1.40	0.2-0.6	0.05-0.14	6.6-7.8	<2	Low-------	0.10			
	9	---	---	---	---	---	---	----------	----			
Reywat----------	0-6	8-18	1.35-1.55	0.6-2.0	0.09-0.13	6.6-7.8	<2	Low-------	0.15	1	8	1-3
	6-19	24-35	1.35-1.55	0.2-0.6	0.10-0.14	6.6-8.4	<2	Moderate	0.15			
	19	---	---	---	---	---	---	----------	----			
Rock outcrop.												
15----------	0-15	12-22	1.20-1.40	0.6-2.0	0.16-0.21	7.9-8.4	2-4	Low-------	0.32	5	4L	1-2
Baldock	15-38	18-27	1.25-1.40	0.6-2.0	0.16-0.21	7.4-9.0	2-4	Low-------	0.32			
	38-60	5-15	1.35-1.50	2.0-6.0	0.09-0.15	7.9-8.4	<2	Low-------	0.10			
16----------	0-15	27-35	1.20-1.40	0.6-2.0	0.19-0.21	7.9-8.4	2-4	Moderate	0.37	5	4L	1-2
Baldock	15-38	18-27	1.25-1.40	0.6-2.0	0.16-0.21	7.4-9.0	2-4	Low-------	0.32			
	38-60	5-15	1.35-1.50	2.0-6.0	0.09-0.15	7.9-8.4	<2	Low-------	0.10			
17, 18----------	0-9	12-18	1.50-1.60	0.6-2.0	0.16-0.18	6.1-7.3	<2	Low-------	0.32	5	5	2-4
Bissell	9-48	25-35	1.40-1.50	0.2-0.6	0.14-0.21	6.6-8.4	<2	Moderate	0.28			
	48-55	12-18	1.50-1.60	0.6-2.0	0.16-0.18	6.6-7.3	<2	Low-------	0.32			
	55-60	2-8	1.55-1.65	>6.0	0.04-0.08	6.6-7.8	<2	Low-------	0.10			
19----------	0-10	28-35	1.40-1.60	0.2-0.6	0.19-0.21	5.6-7.3	<2	Low-------	0.28	5	6	4-6
Blackwell	10-60	20-30	1.40-1.60	0.2-0.6	0.12-0.14	6.1-7.3	<2	Moderate	0.28			
20, 21----------	0-10	25-35	1.30-1.45	0.2-2.0	0.08-0.13	6.1-7.3	<2	Low-------	0.20	2	7	1-3
Bluebell	10-24	25-35	1.35-1.55	0.2-0.6	0.09-0.11	5.6-6.5	<2	Low-------	0.17			
	24	---	---	---	---	---	---	----------	----			
22----------	0-4	10-12	1.20-1.30	0.6-2.0	0.03-0.09	6.1-6.5	<2	Low-------	0.10	2	8	2-3
Bluesprin	4-12	8-14	1.60-1.70	2.0-6.0	0.14-0.17	6.6-7.3	<2	Low-------	0.10			
	12-16	25-35	1.40-1.60	0.2-0.6	0.08-0.10	6.6-7.3	<2	Low-------	0.10			
	16-23	8-18	1.40-1.50	0.6-2.0	0.05-0.09	6.6-7.3	<2	Low-------	0.05			
	23	---	---	---	---	---	---	----------	----			
23*:												
Brody-----------	0-14	10-15	0.90-1.00	0.6-2.0	0.17-0.19	5.6-6.5	<2	Low-------	0.37	2	5	2-4
	14-35	10-20	1.30-1.50	0.6-2.0	0.08-0.10	6.1-6.5	<2	Low-------	0.10			
	35	---	---	---	---	---	---	----------	----			

See footnote at end of table.

Table 14.--Physical and Chemical Properties of the Soils--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Salinity	Shrink-swell potential	Erosion factors		Wind erodibility group	Organic matter
									K	T		
	In	Pct	G/cc	In/hr	In/in	pH	mmhos/cm					Pct
23*:												
Culdecole	0-2	12-18	0.90-1.00	0.6-2.0	0.20-0.21	6.1-7.3	<2	Low	0.37	3	5	2-3
	2-14	12-18	0.90-1.00	0.6-2.0	0.19-0.21	6.1-7.3	<2	Low	0.37			
	14-50	27-35	1.25-1.45	0.2-0.6	0.14-0.20	5.6-7.3	<2	Moderate	0.32			
	50	---	---	---	---	---	---	---	---			
24, 25, 26	0-12	2-12	1.45-1.60	0.6-2.0	0.11-0.13	6.1-6.5	<2	Low	0.37	5	3	1-3
Brownlee	12-32	20-35	1.35-1.55	0.2-0.6	0.14-0.18	5.6-6.5	<2	Moderate	0.32			
	32-60	2-20	1.40-1.60	0.6-2.0	0.11-0.13	5.6-6.5	<2	Low	0.43			
27	0-12	12-20	1.35-1.50	0.6-2.0	0.15-0.17	6.1-6.5	<2	Low	0.37	5	6	1-3
Brownlee	12-32	20-35	1.35-1.55	0.2-0.6	0.14-0.18	5.6-6.5	<2	Moderate	0.32			
	32-60	2-20	1.40-1.60	0.6-2.0	0.11-0.13	5.6-6.5	<2	Low	0.43			
28	0-14	2-15	1.60-1.70	6.0-20	0.10-0.13	5.6-6.5	<2	Low	0.17	3	3	1-2
Bryan	14-60	0-10	1.65-1.75	>20	0.04-0.08	5.6-6.5	<2	Low	0.10			
29	0-12	28-40	1.40-1.50	0.2-0.6	0.19-0.21	5.6-6.5	<2	Moderate	0.37	5	7	3-5
Cabarton	12-16	0-10	1.30-1.40	0.6-2.0	0.21-0.23	5.6-6.5	<2	Low	0.55			
	16-40	40-55	1.20-1.40	0.06-0.2	0.14-0.16	6.1-7.3	<2	High	0.32			
	40-60	30-40	1.40-1.50	0.2-0.6	0.16-0.18	6.1-7.3	<2	Moderate	0.37			
30, 31	0-11	5-10	1.10-1.30	2.0-6.0	0.13-0.16	6.1-7.8	<2	Low	0.32	4	3	1-2
Cashmere	11-60	5-12	1.30-1.50	2.0-6.0	0.12-0.14	6.6-7.8	<2	Low	0.37			
32	0-22	18-27	1.25-1.35	0.6-2.0	0.19-0.21	6.1-7.3	<2	Low	0.28	5	6	4-10
Catharine	22-60	18-35	1.25-1.40	0.6-2.0	0.19-0.21	7.4-7.8	<2	Low	0.37			
33*:												
Chilcott	0-7	12-18	1.20-1.40	0.6-2.0	0.19-0.21	6.6-7.8	<2	Low	0.49	2	5	1-2
	7-26	35-60	1.35-1.50	0.06-0.2	0.14-0.21	6.6-7.8	<2	High	0.32			
	26-40	12-35	1.30-1.50	0.2-0.6	0.16-0.21	7.4-9.0	<2	Moderate	0.43			
	40-44	---	---	---	---	---	---	---	---			
	44-60	2-10	1.45-1.65	2.0-6.0	0.03-0.06	7.9-8.4	<2	Low	0.10			
Vickary	0-10	15-20	1.15-1.35	0.6-2.0	0.19-0.21	6.6-8.4	<2	Low	0.49	2	5	1-2
	10-38	18-27	1.20-1.40	0.6-2.0	0.19-0.21	6.6-8.4	<2	Low	0.49			
	38-42	---	---	---	---	---	---	---	---			
	42-60	2-12	1.35-1.55	6.0-20	---	7.9-8.4	<2	Low	0.10			
34, 35	0-10	8-18	1.50-1.70	2.0-6.0	0.13-0.15	6.6-8.4	<2	Low	0.32	5	3	1-2
Clems	10-56	8-18	1.50-1.70	2.0-6.0	0.13-0.15	6.6-8.4	<2	Low	0.32			
	56-60	5-15	1.40-1.60	0.2-0.6	0.19-0.21	7.9-8.4	<2	Low	0.49			
36	0-18	15-25	1.40-1.50	0.6-2.0	0.16-0.18	6.6-7.3	<2	Low	0.43	2	5	.5-1
Cranecreek	18-35	28-43	1.45-1.55	0.06-0.2	0.16-0.18	6.6-7.3	<2	Moderate	0.37			
	35	---	---	---	---	---	---	---	---			
37*:												
Cranecreek	0-18	15-25	1.40-1.50	0.6-2.0	0.16-0.18	6.6-7.3	<2	Low	0.43	2	5	.5-1
	18-35	28-43	1.45-1.55	0.06-0.2	0.16-0.18	6.6-7.3	<2	Moderate	0.37			
	35	---	---	---	---	---	---	---	---			
Reywat	0-6	8-18	1.35-1.55	0.6-2.0	0.09-0.13	6.6-7.8	<2	Low	0.15	1	8	1-3
	6-19	24-35	1.35-1.55	0.2-0.6	0.10-0.14	6.6-8.4	<2	Moderate	0.15			
	19	---	---	---	---	---	---	---	---			

See footnote at end of table.

Table 14.--Physical and Chemical Properties of the Soils--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Salinity	Shrink-swell potential	Erosion factors		Wind erodibility group	Organic matter
									K	T		
	In	Pct	G/cc	In/hr	In/in	pH	mmhos/cm					Pct
38*:												
Culdecole	0-2	12-18	0.90-1.00	0.6-2.0	0.20-0.21	6.1-7.3	<2	Low	0.37	3	5	2-3
	2-14	12-18	0.90-1.00	0.6-2.0	0.19-0.21	6.1-7.3	<2	Low	0.37			
	14-50	27-35	1.25-1.45	0.2-0.6	0.14-0.20	5.6-7.3	<2	Moderate	0.32			
	50	---	---	---	---	---	---	---	---			
Brody	0-14	10-15	0.90-1.00	0.6-2.0	0.17-0.19	5.6-6.5	<2	Low	0.37	2	5	2-4
	14-35	10-20	1.30-1.50	0.6-2.0	0.08-0.10	6.1-6.5	<2	Low	0.10			
	35	---	---	---	---	---	---	---	---			
39	0-23	15-25	1.10-1.15	0.6-2.0	0.16-0.18	6.6-7.8	<2	Low	0.28	5	5	2-4
Dagor	23-60	18-27	1.15-1.25	0.6-2.0	0.16-0.19	6.6-7.8	<2	Low	0.37			
40, 41	0-20	16-23	1.20-1.40	0.6-2.0	0.12-0.16	5.6-7.3	<2	Low	0.24	5	6	2-4
Demast	20-51	22-27	1.30-1.45	0.2-0.6	0.12-0.16	5.6-7.3	<2	Low	0.28			
	51-60	18-27	1.45-1.65	0.6-2.0	0.07-0.10	5.6-7.3	<2	Low	0.20			
42, 43	0-17	15-20	1.25-1.45	0.6-2.0	0.15-0.20	5.6-7.3	<2	Low	0.24	4	5	4-6
Demasters	17-25	20-27	1.35-1.50	0.6-2.0	0.14-0.20	5.6-7.3	<2	Moderate	0.32			
	25-45	22-30	1.45-1.65	0.6-2.0	0.12-0.16	5.6-7.3	<2	Low	0.20			
	45	---	---	---	---	---	---	---	---			
44	0-5	20-27	1.55-1.60	0.6-2.0	0.16-0.18	6.6-7.3	<2	Low	0.28	1	6	2-4
Demoss	5-9	28-35	1.45-1.55	0.2-0.6	0.19-0.21	6.6-7.3	<2	Moderate	0.32			
	9-12	33-45	1.40-1.45	0.06-0.2	0.14-0.16	6.6-7.3	<2	High	0.28			
	12-17	---	---	---	---	---	---	---	---			
	17	---	---	---	---	---	---	---	---			
45, 46, 47, 48	0-15	28-40	1.30-1.50	0.2-0.6	0.19-0.21	6.1-7.3	<2	High	0.24	2	4	1-3
Deshler	15-30	35-60	1.40-1.60	0.06-0.2	0.14-0.20	6.6-7.8	<2	High	0.24			
	30	---	---	---	---	---	---	---	---			
49, 50	0-15	28-40	1.40-1.60	0.2-0.6	0.07-0.09	6.6-7.3	<2	Moderate	0.10	2	8	1-3
Deshler	15-30	35-60	1.30-1.50	0.06-0.2	0.14-0.20	6.6-7.8	<2	High	0.24			
	30	---	---	---	---	---	---	---	---			
51*, 52*:												
Deshler	0-15	28-40	1.30-1.50	0.2-0.6	0.19-0.21	6.1-7.3	<2	High	0.24	2	4	1-3
	15-30	35-60	1.40-1.60	0.06-0.2	0.14-0.20	6.6-7.8	<2	High	0.24			
	30	---	---	---	---	---	---	---	---			
Agerdelly	0-4	60-70	1.00-1.25	<0.06	0.14-0.16	6.6-8.4	<2	High	0.24	5	4	1-2
	4-38	60-80	1.25-1.50	<0.06	0.14-0.16	7.4-8.4	<2	High	0.24			
	38-60	60-80	1.25-1.50	<0.06	0.14-0.16	7.4-8.4	<2	High	0.24			
53*, 54*:												
Deshler	0-15	28-40	1.40-1.60	0.2-0.6	0.07-0.09	6.6-7.3	<2	Moderate	0.10	2	8	1-3
	15-30	35-60	1.30-1.50	0.06-0.2	0.14-0.20	6.6-7.8	<2	High	0.24			
	30	---	---	---	---	---	---	---	---			
Agerdelly	0-4	60-70	1.00-1.25	<0.06	0.12-0.16	6.6-8.4	<2	High	0.10	5	8	1-2
	4-38	60-80	1.25-1.50	<0.06	0.14-0.16	7.4-8.4	<2	High	0.24			
	38-60	60-80	1.25-1.50	<0.06	0.14-0.16	7.4-8.4	<2	High	0.24			
55*, 56*, 57*:												
Deshler	0-15	20-27	1.10-1.30	0.6-2.0	0.13-0.19	6.1-7.3	<2	Low	0.37	2	4	1-3
	15-30	35-60	1.40-1.60	0.06-0.2	0.14-0.20	6.6-7.8	<2	High	0.24			
	30	---	---	---	---	---	---	---	---			

See footnote at end of table.

Table 14.--Physical and Chemical Properties of the Soils--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Salinity	Shrink-swell potential	Erosion factors K	Erosion factors T	Wind erodibility group	Organic matter
	In	Pct	G/cc	In/hr	In/in	pH	mmhos/cm					Pct
55*, 56*, 57*:												
Brownlee	0-12	2-12	1.45-1.60	0.6-2.0	0.11-0.13	6.1-6.5	<2	Low	0.37	5	3	1-3
	12-32	20-35	1.35-1.55	0.2-0.6	0.14-0.18	5.6-6.5	<2	Moderate	0.32			
	32-60	2-20	1.40-1.60	0.6-2.0	0.11-0.13	5.6-6.5	<2	Low	0.43			
58*, 59*:												
Dashler	0-15	28-40	1.30-1.50	0.2-0.6	0.19-0.21	6.1-7.3	<2	High	0.24	2	4	1-3
	15-30	35-60	1.40-1.60	0.06-0.2	0.14-0.20	6.6-7.8	<2	High	0.24			
	30	---	---	---	---	---	---	---	---			
Devnot	0-4	27-35	1.15-1.35	0.2-0.6	0.12-0.16	6.1-7.8	<2	Moderate	0.15	1	8	1-3
	4-19	40-60	1.35-1.45	0.06-0.2	0.10-0.13	6.1-7.8	<2	High	0.24			
	19	---	---	---	---	---	---	---	---			
60	0-5	15-25	1.30-1.50	0.6-2.0	0.19-0.21	6.1-7.3	<2	Low	0.32	3	5	2-3
Deterson	5-23	18-27	1.35-1.55	0.6-2.0	0.19-0.21	6.1-7.3	<2	Low	0.37			
	23-60	35-45	1.40-1.65	0.06-0.2	0.14-0.18	6.6-8.4	<2	High	0.15			
61	0-6	27-35	1.20-1.30	0.06-0.2	0.16-0.23	6.1-7.3	<2	Moderate	0.20	3	6	2-3
Deterson	6-14	18-27	1.35-1.55	0.6-2.0	0.19-0.21	6.1-7.3	<2	Low	0.37			
	14-60	35-45	1.40-1.65	0.06-0.2	0.14-0.18	6.6-8.4	<2	High	0.15			
62*:												
Dishner	0-8	10-27	1.30-1.50	0.6-2.0	0.08-0.10	6.1-6.5	<2	Low	0.15	1	8	1-2
	8-12	40-60	1.40-1.60	0.06-0.2	0.15-0.17	6.6-7.8	<2	High	0.15			
	12	---	---	---	---	---	---	---	---			
Haw	0-17	10-20	1.25-1.35	0.6-2.0	0.16-0.21	6.1-7.8	<2	Low	0.43	4	5	2-4
	17-38	22-34	1.30-1.45	0.2-0.6	0.14-0.21	6.1-7.8	<2	Moderate	0.37			
	38-60	10-25	1.35-1.45	6.0-20	0.11-0.18	7.4-9.0	<2	Low	0.28			
63	0-20	4-12	1.40-1.55	2.0-6.0	0.13-0.15	5.6-6.0	<2	Low	0.28	3	5	2-5
Donnel	20-39	4-12	1.40-1.55	2.0-6.0	0.10-0.12	5.6-6.5	<2	Low	0.24			
	39-60	2-10	1.40-1.50	6.0-20	0.07-0.09	5.6-6.5	<2	Low	0.17			
64.												
Duneland												
65, 66	0-12	12-22	1.35-1.45	0.6-2.0	0.19-0.21	6.6-7.8	<2	Moderate	0.43	2	5	1-2
Elijah	12-20	26-35	1.40-1.50	0.2-0.6	0.19-0.21	6.6-8.4	<2	Moderate	0.43			
	20-38	12-18	1.50-1.60	0.6-2.0	0.16-0.21	7.9-9.0	<2	Low	0.43			
	38-53	---	---	---	---	---	---	---	---			
	53-60	0-7	1.60-1.70	2.0-6.0	---	7.4-8.4	<2	Low	0.15			
67	0-10	12-18	1.60-1.70	2.0-6.0	0.13-0.15	6.1-7.3	<2	Low	0.20	3	8	1-2
Falk	10-38	12-18	1.60-1.70	2.0-6.0	0.11-0.15	6.1-7.3	<2	Low	0.20			
	38-60	2-6	1.65-1.75	>6.0	0.03-0.07	6.6-7.3	<2	Low	0.17			
68, 69	0-10	30-40	1.20-1.40	0.2-0.6	0.14-0.17	6.1-7.8	<2	Moderate	0.32	2	4	2-4
Gem	10-29	35-60	1.35-1.45	0.06-0.2	0.13-0.16	6.1-7.8	<2	High	0.24			
	29	---	---	---	---	---	---	---	---			
70	0-10	30-40	1.20-1.40	0.2-0.6	0.08-0.12	6.1-7.8	<2	Moderate	0.15	2	4	2-4
Gem	10-29	35-60	1.35-1.45	0.06-0.2	0.13-0.16	6.1-7.8	<2	High	0.24			
	29	---	---	---	---	---	---	---	---			
71*, 72*:												
Gem	0-10	30-40	1.20-1.40	0.2-0.6	0.08-0.12	6.1-7.8	<2	Moderate	0.15	2	4	2-4
	10-29	35-60	1.35-1.45	0.06-0.2	0.13-0.16	6.1-7.8	<2	High	0.24			
	29	---	---	---	---	---	---	---	---			

See footnote at end of table.

Table 14.--Physical and Chemical Properties of the Soils--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Salinity	Shrink-swell potential	Erosion factors K	Erosion factors T	Wind erodibility group	Organic matter
	In	Pct	G/cc	In/hr	In/in	pH	mmhos/cm					Pct
71*, 72*:												
Bakeoven	0-3	15-25	1.25-1.35	0.2-0.6	0.06-0.09	6.1-7.8	<2	Low	0.05	1	8	1-3
	3-9	18-33	1.30-1.40	0.2-0.6	0.05-0.14	6.6-7.8	<2	Low	0.10			
	9	---	---	---	---	---	---	---	---			
73*, 74*:												
Gem	0-10	30-40	1.20-1.40	0.2-0.6	0.08-0.12	6.1-7.8	<2	Moderate	0.15	2	4	2-4
	10-29	35-60	1.35-1.45	0.06-0.2	0.13-0.16	6.1-7.8	<2	High	0.24			
	29	---	---	---	---	---	---	---	---			
Raywat	0-6	8-18	1.35-1.55	0.6-2.0	0.09-0.13	6.6-7.8	<2	Low	0.15	1	8	1-3
	6-19	24-35	1.35-1.55	0.2-0.6	0.10-0.14	6.6-8.4	<2	Moderate	0.15			
	19	---	---	---	---	---	---	---	---			
75, 76	0-17	12-18	1.50-1.60	0.6-2.0	0.18-0.24	5.1-6.0	<2	Low	0.32	4	5	2-4
Gestrin	17-33	8-14	1.60-1.70	2.0-6.0	0.14-0.17	5.6-6.0	<2	Low	0.24			
	33-42	2-12	1.70-1.80	6.0-20	0.08-0.10	5.6-6.0	<2	Low	0.17			
	42-60	1-8	1.70-1.80	>20	0.04-0.06	5.6-6.5	<2	Low	0.10			
77, 78, 79	0-13	30-40	1.10-1.30	0.6-2.0	0.19-0.21	6.6-7.3	<2	Moderate	0.28	2	6	1-2
Glasgow	13-38	35-55	1.20-1.40	0.06-0.2	0.14-0.16	6.6-8.4	<2	High	0.37			
	38	---	---	---	---	---	---	---	---			
80*, 81*:												
Glasgow	0-13	30-40	1.10-1.30	0.6-2.0	0.19-0.21	6.6-7.3	<2	Moderate	0.28	2	6	1-2
	13-38	35-55	1.20-1.40	0.06-0.2	0.14-0.16	6.6-8.4	<2	High	0.37			
	38	---	---	---	---	---	---	---	---			
Lankbush	0-12	12-18	1.45-1.60	2.0-6.0	0.11-0.13	6.6-7.3	<2	Low	0.28	5	3	1-2
	12-43	20-30	1.45-1.60	0.2-0.6	0.16-0.20	7.4-8.4	<2	Moderate	0.37			
	43-60	0-8	1.55-1.65	2.0-6.0	0.04-0.08	7.4-9.0	<2	Low	0.28			
82, 83, 84, 85	0-12	16-22	1.20-1.40	0.6-2.0	0.17-0.20	6.6-8.4	<2	Low	0.49	5	4L	1-2
Greenleaf	12-21	22-30	1.20-1.40	0.2-0.6	0.17-0.20	7.4-8.4	<2	Moderate	0.49			
	21-60	6-20	1.40-1.50	0.2-0.6	0.18-0.21	7.4-9.0	<2	Low	0.32			
86, 87	0-18	15-25	1.40-1.60	0.6-2.0	0.16-0.21	6.6-7.3	<2	Low	0.28	2	5	3-5
Gross	18-38	24-35	1.40-1.50	0.2-0.6	0.15-0.20	6.1-7.3	<2	Low	0.24			
	38	---	---	---	---	---	---	---	---			
88*:												
Gross	0-18	15-25	1.40-1.60	0.6-2.0	0.16-0.21	6.6-7.3	<2	Low	0.28	2	5	3-5
	18-38	24-35	1.40-1.50	0.2-0.6	0.15-0.20	6.1-7.3	<2	Low	0.24			
	38	---	---	---	---	---	---	---	---			
Bakeoven	0-3	15-25	1.25-1.35	0.2-0.6	0.06-0.09	6.1-7.8	<2	Low	0.05	1	8	1-3
	3-9	18-33	1.30-1.40	0.2-0.6	0.05-0.14	6.6-7.8	<2	Low	0.10			
	9	---	---	---	---	---	---	---	---			
89*:												
Gross	0-18	15-25	1.40-1.60	0.6-2.0	0.15-0.20	6.6-7.3	<2	Low	0.28	2	8	3-5
	18-38	24-35	1.40-1.50	0.2-0.6	0.15-0.20	6.1-7.3	<2	Low	0.24			
	38	---	---	---	---	---	---	---	---			
Bakeoven	0-3	15-25	1.25-1.35	0.2-0.6	0.06-0.09	6.1-7.8	<2	Low	0.05	1	8	1-3
	3-9	18-33	1.30-1.40	0.2-0.6	0.05-0.14	6.6-7.8	<2	Low	0.10			
	9	---	---	---	---	---	---	---	---			

See footnote at end of table.

Table 14.--Physical and Chemical Properties of the Soils--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Salinity	Shrink-swell potential	Erosion factors		Wind erodibility group	Organic matter
									K	T		
	In	Pct	G/cc	In/hr	In/in	pH	mmhos/cm					Pct
90*:												
Gwin	0-5	8-18	1.20-1.35	0.6-2.0	0.09-0.13	6.6-7.3	0-0	Low	0.20	1	8	2-4
	5-12	20-27	1.25-1.40	0.6-2.0	0.06-0.10	6.6-7.3	0-0	Low	0.10			
	12-20	28-35	1.30-1.45	0.2-0.6	0.05-0.10	6.6-7.3	0-0	Moderate	0.10			
	20	---	---	2.0-20	---	---	---	---	---			
Rock outcrop.												
91, 92	0-23	12-22	1.50-1.60	0.6-2.0	0.16-0.18	6.1-7.3	<2	Low	0.32	5	5	1-2
Harpt	23-40	20-27	1.50-1.60	0.6-2.0	0.16-0.21	6.1-7.8	<2	Low	0.37			
	40-60	10-15	1.40-1.70	0.2-0.6	0.13-0.18	6.1-7.8	<2	Low	0.28			
93, 94, 95, 96	0-17	10-20	1.25-1.35	0.6-2.0	0.16-0.21	6.1-7.8	<2	Low	0.43	4	5	2-4
Haw	17-38	22-34	1.30-1.45	0.2-0.6	0.14-0.21	6.1-7.8	<2	Moderate	0.37			
	38-60	10-25	1.35-1.45	6.0-20	0.11-0.18	7.4-9.0	<2	Low	0.28			
97, 98, 99, 100	0-13	20-26	1.45-1.60	0.2-2.0	0.16-0.21	6.6-7.3	<2	Low	0.32	5	5	4-5
Jacknife	13-41	35-50	1.40-1.60	0.06-0.2	0.15-0.20	6.6-7.3	<2	High	0.20			
	41-60	25-40	1.40-1.60	0.06-0.2	0.10-0.14	6.6-7.3	<2	Moderate	0.10			
101	0-13	15-26	1.30-1.50	0.2-2.0	0.09-0.15	6.6-7.3	<2	Low	0.20	5	5	2-4
Jacknife	13-41	35-50	1.40-1.60	0.06-0.2	0.11-0.16	6.6-7.3	<2	High	0.10			
	41-60	25-35	1.40-1.60	0.06-0.2	0.10-0.14	6.6-7.3	<2	Moderate	0.10			
102	0-29	40-50	1.40-1.60	0.06-0.2	0.13-0.16	6.1-7.8	<2	High	0.28	5	8	<2
Jenny	29-38	40-50	1.40-1.60	0.06-0.2	0.13-0.16	6.6-8.4	<2	High	0.32			
	38-60	25-50	1.40-1.60	0.06-0.2	0.13-0.17	7.9-9.0	<2	High	0.32			
103	0-20	5-15	1.40-1.55	2.0-6.0	0.04-0.08	5.6-7.3	<2	Low	0.20	3	3	2-4
Johnson	20-42	20-30	1.25-1.45	0.6-2.0	0.16-0.20	5.6-7.3	<2	Moderate	0.28			
	42	---	---	---	---	---	---	---	---			
104	0-13	5-15	1.00-1.30	2.0-6.0	0.12-0.15	5.1-6.5	<2	Low	0.32	4	3	2-4
Jughandle	13-29	5-10	1.30-1.60	2.0-6.0	0.11-0.16	5.1-6.5	<2	Low	0.24			
	29-48	2-7	1.30-1.60	2.0-6.0	0.05-0.08	5.1-6.5	<2	Low	0.15			
	48	---	---	---	---	---	---	---	---			
105*:												
Jughandle	0-13	5-15	1.00-1.30	2.0-6.0	0.12-0.15	5.1-6.5	<2	Low	0.32	4	3	2-4
	13-29	5-10	1.30-1.60	2.0-6.0	0.11-0.16	5.1-6.5	<2	Low	0.24			
	29-48	2-7	1.30-1.60	2.0-6.0	0.05-0.08	5.1-6.5	<2	Low	0.15			
	48	---	---	---	---	---	---	---	---			
Suttler	0-4	7-15	1.10-1.25	0.6-2.0	0.16-0.18	5.1-6.0	<2	Low	0.37	3	5	2-4
	4-15	5-10	1.25-1.45	0.6-2.0	0.13-0.18	4.5-5.5	<2	Low	0.28			
	15-45	2-7	1.35-1.55	0.6-2.0	0.10-0.13	4.5-5.5	<2	Low	0.15			
	45	---	---	---	---	---	---	---	---			
106	0-21	2-15	1.50-1.60	6.0-20	0.11-0.13	6.1-6.5	<2	Low	0.24	5	3	2-4
Kangas	21-40	0-12	1.60-1.70	6.0-20	0.07-0.09	6.1-6.5	<2	Low	0.17			
	40-60	0-10	1.60-1.70	6.0-20	0.02-0.04	6.1-6.5	<2	Low	0.10			
107	0-17	12-25	1.20-1.30	0.6-2.0	0.15-0.17	6.1-7.3	<2	Low	0.24	2	6	2-4
Klickar	17-34	18-35	1.25-1.40	0.2-0.6	0.10-0.13	6.1-6.5	<2	Moderate	0.15			
	34	---	---	---	---	---	---	---	---			
108	0-8	15-20	1.20-1.40	0.6-2.0	0.19-0.21	6.1-7.3	<2	Low	0.37	5	8	2-4
Klickson	8-17	18-27	1.20-1.40	0.6-2.0	0.12-0.14	6.1-7.3	<2	Low	0.20			
	17-50	18-27	1.25-1.45	0.6-2.0	0.12-0.14	6.1-7.3	<2	Low	0.10			
	50-60	38-45	1.40-1.60	0.06-0.2	0.05-0.11	6.1-7.3	<2	Moderate	0.10			

See footnote at end of table.

Table 14.--Physical and Chemical Properties of the Soils--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Salinity	Shrink-swell potential	Erosion factors		Wind erodibility group	Organic matter
									K	T		
	In	Pct	G/cc	In/hr	In/in	pH	mmhos/cm					Pct
109*:												
Klickson	0-8	15-20	1.20-1.40	0.6-2.0	0.19-0.21	6.1-7.3	<2	Low	0.37	5	8	2-4
	8-17	18-27	1.20-1.40	0.6-2.0	0.12-0.14	6.1-7.3	<2	Low	0.20			
	17-50	18-27	1.25-1.45	0.6-2.0	0.12-0.14	6.1-7.3	<2	Low	0.10			
	50-60	38-45	1.40-1.60	0.06-0.2	0.05-0.11	6.1-7.3	<2	Moderate	0.10			
Rock outcrop.												
110	0-10	8-18	1.30-1.40	0.6-2.0	0.14-0.17	6.6-7.3	<2	Low	0.20	3	5	2-4
Langrell	10-24	8-18	1.30-1.40	0.6-2.0	0.10-0.14	6.6-7.3	<2	Low	0.20			
	24-30	8-18	1.35-1.45	0.6-2.0	0.05-0.08	6.6-7.3	<2	Low	0.10			
	30-60	8-18	1.40-1.50	2.0-6.0	0.04-0.07	6.6-7.8	<2	Low	0.05			
111	0-10	8-18	1.30-1.40	0.6-2.0	0.12-0.16	6.6-7.3	<2	Low	0.17	3	6	2-4
Langrell	10-24	8-18	1.30-1.40	0.6-2.0	0.10-0.14	6.6-7.3	<2	Low	0.20			
	24-30	8-18	1.35-1.45	0.6-2.0	0.05-0.08	6.6-7.3	<2	Low	0.10			
	30-60	8-18	1.40-1.50	0.6-2.0	0.04-0.07	6.6-7.3	<2	Low	0.05			
112, 113, 114, 115	0-12	12-18	1.45-1.60	2.0-6.0	0.11-0.13	6.6-7.3	<2	Low	0.28	5	3	1-2
Lankbush	12-43	20-30	1.45-1.60	0.2-0.6	0.16-0.20	7.4-8.4	<2	Moderate	0.37			
	43-60	0-8	1.55-1.65	2.0-6.0	0.04-0.08	7.4-9.0	<2	Low	0.28			
116, 117	0-10	15-27	1.50-1.60	0.6-2.0	0.16-0.21	6.1-7.8	<2	Low	0.43	2	5	1-2
Lanktree	10-26	35-45	1.45-1.60	0.06-0.2	0.14-0.21	6.6-7.8	<2	High	0.28			
	26-60	15-20	1.50-1.70	0.6-2.0	0.11-0.21	7.4-9.0	<2	Low	0.43			
118	0-10	30-40	1.30-1.50	0.2-0.6	0.19-0.21	6.1-7.8	<2	Moderate	0.28	5	4	1-2
Lanktree	10-40	35-45	1.40-1.60	0.06-0.2	0.14-0.21	6.6-7.8	<2	High	0.28			
	40-60	15-20	1.25-1.45	0.6-2.0	0.16-0.18	7.4-9.0	<2	Low	0.37			
119	0-8	15-27	1.25-1.45	0.6-2.0	0.14-0.16	6.1-7.8	<2	Low	0.17	5	8	1-2
Lanktree	8-38	27-45	1.40-1.60	0.06-0.2	0.14-0.21	6.6-7.8	<2	High	0.28			
	38-60	15-20	1.20-1.40	0.6-2.0	0.16-0.18	7.4-9.0	<2	Low	0.37			
120*:												
Lanktree	0-10	15-27	1.50-1.60	0.6-2.0	0.16-0.21	6.1-7.8	<2	Low	0.43	2	5	1-2
	10-36	35-45	1.45-1.60	0.06-0.2	0.14-0.21	6.6-7.8	<2	High	0.28			
	36-60	15-20	1.50-1.70	0.6-2.0	0.11-0.21	7.4-9.0	<2	Low	0.43			
Lankbush	0-12	12-18	1.45-1.60	2.0-6.0	0.11-0.13	6.6-7.3	<2	Low	0.28	5	3	1-2
	12-43	20-30	1.45-1.60	0.2-0.6	0.16-0.20	7.4-8.4	<2	Moderate	0.37			
	43-60	0-8	1.55-1.65	2.0-6.0	0.04-0.08	7.4-9.0	<2	Low	0.28			
121, 122	0-4	2-15	1.40-1.50	2.0-6.0	0.11-0.13	5.1-6.5	<2	Low	0.24	4	3	1-2
Ligget	4-54	0-15	1.50-1.60	2.0-6.0	0.09-0.11	4.5-6.5	<2	Low	0.28			
	54	---	---	---	---	---	---	---	---			
123, 124, 125	0-4	5-18	1.50-1.65	2.0-6.0	0.11-0.13	6.1-7.3	<2	Low	0.17	5	3	<1
Lolalita	4-60	5-18	1.55-1.70	2.0-6.0	0.10-0.13	6.1-7.8	<2	Low	0.17			
126*:												
Lolalita	0-4	5-18	1.50-1.65	2.0-6.0	0.11-0.13	6.1-7.3	<2	Low	0.17	5	3	<1
	4-60	5-18	1.55-1.70	2.0-6.0	0.10-0.13	6.1-7.8	<2	Low	0.17			
Glasgow	0-13	30-40	1.10-1.30	0.6-2.0	0.19-0.21	6.6-7.3	<2	Moderate	0.28	2	6	1-2
	13-38	35-55	1.20-1.40	0.06-0.2	0.14-0.16	6.6-8.4	<2	High	0.37			
	38	---	---	---	---	---	---	---	---			

See footnote at end of table.

Table 14.--Physical and Chemical Properties of the Soils--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Salinity	Shrink-swell potential	Erosion factors		Wind erodibility group	Organic matter
									K	T		
	In	Pct	G/cc	In/hr	In/in	pH	mmhos/cm					Pct
127*:												
Lolalita	0-4	5-18	1.50-1.65	2.0-6.0	0.11-0.13	6.1-7.3	<2	Low	0.17	5	3	<1
	4-60	5-18	1.55-1.70	2.0-6.0	0.10-0.13	6.1-7.8	<2	Low	0.17			
Saralegui	0-3	5-12	1.60-1.70	2.0-6.0	0.11-0.13	5.6-6.5	<2	Low	0.24	5	3	.8-2
	3-60	8-18	1.60-1.70	2.0-6.0	0.11-0.13	6.6-7.8	<2	Low	0.20			
128*, 129*:												
Lorella	0-6	27-33	1.20-1.30	0.2-0.6	0.10-0.14	6.6-7.3	<2	Moderate	0.15	1	8	1-4
	6-15	27-40	1.20-1.30	0.2-0.6	0.09-0.10	6.6-7.8	<2	Moderate	0.17			
	15-18	40-50	1.35-1.50	0.06-0.2	0.05-0.07	7.4-7.8	<2	High	0.15			
	18	---	---	---	---	---	---	---	---			
Rock outcrop.												
130	0-5	12-20	1.10-1.30	0.6-2.0	0.17-0.19	6.6-7.3	<2	Low	0.28	5	6	2-4
McDaniel	5-60	30-35	1.30-1.40	0.2-0.6	0.08-0.11	6.6-7.3	<2	Moderate	0.10			
131*:												
McDaniel	0-5	15-20	1.10-1.30	0.6-2.0	0.16-0.18	6.6-7.3	<2	Low	0.20	5	7	2-4
	5-60	30-35	1.30-1.40	0.2-0.6	0.08-0.11	6.6-7.3	<2	Moderate	0.10			
Rockly	0-3	18-27	1.20-1.35	0.6-2.0	0.07-0.12	6.1-7.3	<2	Low	0.15	1	8	2-4
	3-8	27-35	1.20-1.35	0.2-0.6	0.08-0.13	6.1-7.3	<2	Low	0.10			
	8	---	---	---	---	---	---	---	---			
132*:												
McDaniel	0-5	15-20	1.10-1.30	0.6-2.0	0.16-0.18	6.6-7.3	<2	Low	0.20	5	7	2-4
	5-60	30-35	1.30-1.40	0.2-0.6	0.08-0.11	6.6-7.3	<2	Moderate	0.10			
Starveout	0-3	18-24	1.40-1.60	0.6-2.0	0.14-0.16	6.1-7.3	<2	Low	0.28	5	7	2-4
	3-21	30-35	1.50-1.70	0.2-0.6	0.17-0.18	6.6-7.8	<2	Moderate	0.32			
	21-60	30-45	1.30-1.50	0.2-0.6	0.16-0.18	6.6-7.8	<2	High	0.32			
133, 134, 135	0-7	18-27	1.30-1.50	0.6-2.0	0.19-0.21	6.1-6.5	<2	Low	0.37	2	5	4-6
Meland	7-25	27-35	1.40-1.60	0.2-0.6	0.18-0.20	5.6-6.5	<2	Moderate	0.24			
	25	---	---	---	---	---	---	---	---			
136	0-7	15-25	1.20-1.35	0.6-2.0	0.10-0.12	6.1-7.3	<2	Low	0.20	3	8	4-6
Meland	7-25	30-35	1.30-1.40	0.2-0.6	0.12-0.16	5.6-6.5	<2	Moderate	0.24			
	25	---	---	---	---	---	---	---	---			
137*, 138*:												
Meland	0-7	10-25	1.20-1.35	0.6-2.0	0.12-0.16	6.1-7.3	<2	Low	0.24	3	6	4-6
	7-25	30-35	1.30-1.40	0.2-0.6	0.12-0.16	5.6-6.5	<2	Moderate	0.24			
	25	---	---	---	---	---	---	---	---			
Riggins	0-4	15-25	1.30-1.50	0.2-0.6	0.06-0.09	6.1-7.3	<2	Low	0.10	1	8	2-4
	4-19	27-35	1.40-1.60	0.2-0.6	0.04-0.08	6.1-7.3	<2	Low	0.15			
	19	---	---	---	---	---	---	---	---			
139	0-12	18-25	1.50-1.60	2.0-6.0	0.19-0.22	4.5-5.5	<2	Moderate	0.17	3	8	5-10
Melton	12-16	18-25	1.50-1.60	0.6-2.0	0.16-0.18	4.5-5.5	<2	Moderate	0.32			
	16-33	2-15	1.70-1.80	2.0-6.0	0.06-0.09	4.5-5.5	<2	Low	0.15			
	33-60	0-12	1.50-1.60	6.0-20	0.04-0.06	4.5-5.5	<2	Low	0.05			
140*:												
Melton	0-12	18-25	1.50-1.60	2.0-6.0	0.19-0.22	4.5-5.5	<2	Moderate	0.17	3	8	5-10
	12-16	18-25	1.50-1.60	0.6-2.0	0.16-0.18	4.5-5.5	<2	Moderate	0.32			
	16-33	2-15	1.70-1.80	2.0-6.0	0.06-0.09	4.5-5.5	<2	Low	0.15			
	33-60	0-12	1.50-1.60	6.0-20	0.04-0.06	4.5-5.5	<2	Low	0.05			

See footnote at end of table.

Table 14.--Physical and Chemical Properties of the Soils--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Salinity	Shrink-swell potential	Erosion factors K	Erosion factors T	Wind erodibility group	Organic matter
	In	Pct	G/cc	In/hr	In/in	pH	mmhos/cm					Pct
140*:												
Roseberry	0-26	8-15	1.25-1.45	2.0-6.0	0.12-0.17	5.1-6.0	<2	Low	0.28	5	6	3-6
	26-40	0-15	1.40-1.60	2.0-6.0	0.06-0.09	5.1-6.0	<2	Low	0.10			
	40-55	5-18	1.40-1.60	2.0-6.0	0.11-0.16	5.1-6.0	<2	Low	0.20			
	55-60	0-7	1.50-1.65	6.0-20	0.02-0.04	5.1-6.0	<2	Low	0.05			
141, 142, 143, 144, 145	0-10	27-35	1.25-1.40	0.2-0.6	0.19-0.21	6.6-7.3	<2	Moderate	0.32	5	7	2-4
Midvale	10-30	35-45	1.20-1.30	0.06-0.2	0.14-0.21	6.6-7.3	<2	High	0.32			
	30-56	10-27	1.30-1.45	0.06-0.2	0.16-0.18	6.6-7.8	<2	Low	0.37			
	56-60	5-20	1.25-1.35	0.06-0.2	0.15-0.21	6.6-7.8	<2	Low	0.43			
146*:												
Midvale	0-10	27-35	1.25-1.40	0.2-0.6	0.19-0.21	6.6-7.3	<2	Moderate	0.32	5	7	2-4
	10-30	35-45	1.20-1.30	0.06-0.2	0.14-0.21	6.6-7.3	<2	High	0.32			
	30-56	10-27	1.30-1.45	0.06-0.2	0.16-0.18	6.6-7.8	<2	Low	0.37			
	56-60	5-20	1.25-1.35	0.06-0.2	0.15-0.21	6.6-7.8	<2	Low	0.43			
Damoss	0-5	20-27	1.55-1.60	0.6-2.0	0.16-0.18	6.6-7.3	<2	Low	0.28	1	6	2-4
	5-9	28-35	1.45-1.55	0.2-0.6	0.19-0.21	6.6-7.3	<2	Moderate	0.32			
	9-12	33-45	1.40-1.45	0.06-0.2	0.14-0.16	6.6-7.3	<2	High	0.28			
	12-17	---	---	---	---	---	---	---	---			
	17	---	---	---	---	---	---	---	---			
147*:												
Molly	0-11	5-15	0.80-0.95	0.6-2.0	0.14-0.18	5.6-7.3	<2	Low	0.49	3	5	2-4
	11-26	5-10	1.50-1.70	2.0-6.0	0.07-0.11	4.5-6.5	<2	Low	0.24			
	26-40	5-10	1.50-1.70	2.0-6.0	0.06-0.10	4.5-6.5	<2	Low	0.15			
	40-60	5-10	1.50-1.70	2.0-6.0	0.05-0.09	4.5-6.5	<2	Low	0.10			
	60	---	---	---	---	---	---	---	---			
Littlesalmon	0-13	10-20	0.80-0.95	0.6-2.0	0.14-0.17	6.1-6.5	<2	Low	0.28	3	5	2-4
	13-20	5-20	1.60-1.70	6.0-20	0.05-0.07	5.6-6.0	<2	Low	0.17			
	20-60	2-10	1.60-1.70	6.0-20	0.02-0.05	6.1-7.3	<2	Low	0.10			
	60	---	---	---	---	---	---	---	---			
148*:												
Molly	0-11	5-15	0.80-0.95	0.6-2.0	0.14-0.18	5.6-7.3	<2	Low	0.49	3	5	2-4
	11-26	5-10	1.50-1.70	2.0-6.0	0.07-0.11	4.5-6.5	<2	Low	0.24			
	26-40	5-10	1.50-1.70	2.0-6.0	0.06-0.10	4.5-6.5	<2	Low	0.15			
	40-60	5-10	1.50-1.70	2.0-6.0	0.05-0.09	4.5-6.5	<2	Low	0.10			
	60	---	---	---	---	---	---	---	---			
Littlesalmon	0-13	10-20	0.80-0.95	0.6-2.0	0.14-0.17	6.1-6.5	<2	Low	0.28	3	5	2-4
	13-20	5-20	1.60-1.70	6.0-20	0.05-0.07	5.6-6.0	<2	Low	0.17			
	20-60	2-10	1.60-1.70	6.0-20	0.02-0.05	6.1-7.3	<2	Low	0.10			
	60	---	---	---	---	---	---	---	---			
Rock outcrop.												
149	0-20	10-15	1.40-1.50	2.0-6.0	0.09-0.14	6.1-7.3	<2	Low	0.10	2	3	1-3
Moonstone	20-34	10-15	1.55-1.65	2.0-6.0	0.08-0.13	6.1-7.3	<2	Low	0.10			
	34	---	---	---	---	---	---	---	---			
150	0-15	10-20	1.50-1.70	2.0-6.0	0.13-0.15	6.6-7.8	<2	Low	0.24	3	3	2-4
Moulton	15-35	10-20	1.50-1.70	2.0-6.0	0.11-0.15	6.6-7.8	<2	Low	0.32			
	35-60	5-10	1.40-1.60	6.0-20	0.04-0.08	6.6-7.8	<2	Low	0.05			
151	0-12	10-20	1.40-1.50	0.6-2.0	0.16-0.18	6.6-7.8	<2	Low	0.37	3	5	2-4
Moulton	12-26	10-20	1.50-1.70	2.0-6.0	0.11-0.15	6.6-7.8	<2	Low	0.32			
	26-60	5-10	1.40-1.60	6.0-20	0.04-0.08	6.6-7.8	<2	Low	0.05			

See footnote at end of table.

Table 14.--Physical and Chemical Properties of the Soils--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Salinity	Shrink-swell potential	Erosion factors		Wind erodibility group	Organic matter
									K	T		
	In	Pct	G/cc	In/hr	In/in	pH	mmhos/cm					Pct
152*:												
Moulton	0-15	10-20	1.50-1.70	2.0-6.0	0.13-0.15	6.6-7.8	<2	Low	0.24	3	3	2-4
	15-35	10-20	1.50-1.70	2.0-6.0	0.11-0.15	6.6-7.8	<2	Low	0.32			
	35-60	5-10	1.40-1.60	6.0-20	0.04-0.08	6.6-7.8	<2	Low	0.05			
Falk	0-10	12-18	1.60-1.70	2.0-6.0	0.13-0.15	6.1-7.3	<2	Low	0.20	3	8	1-2
	10-38	12-18	1.60-1.70	2.0-6.0	0.11-0.15	6.1-7.3	<2	Low	0.20			
	38-60	2-6	1.65-1.75	>6.0	0.03-0.07	6.6-7.3	<2	Low	0.17			
153*:												
Mulett	0-2	10-20	1.30-1.50	0.6-2.0	0.09-0.12	7.4-8.4	<2	Low	0.17	1	8	1-2
	2-12	10-27	1.40-1.60	0.6-2.0	0.05-0.09	7.9-9.0	<2	Low	0.15			
	12	---	---	---	---	---	---	---	---			
Mackay	0-4	10-20	1.50-1.65	2.0-6.0	0.08-0.11	7.4-8.4	<2	Low	0.10	2	8	1-2
	4-24	20-30	1.50-1.60	2.0-6.0	0.08-0.11	7.4-8.4	<2	Moderate	0.20			
	24	---	---	---	---	---	---	---	---			
154*:												
Nazaton	0-16	15-25	1.40-1.50	0.6-2.0	0.15-0.18	5.6-6.5	<2	Low	0.17	5	7	2-5
	16-60	15-25	1.45-1.55	2.0-6.0	0.07-0.09	6.1-7.3	<2	Low	0.05			
Naz	0-23	7-13	1.60-1.70	2.0-6.0	0.14-0.16	5.6-7.3	<2	Low	0.28	3	5	3-6
	23-60	2-13	1.40-1.50	2.0-6.0	0.11-0.12	5.6-7.3	<2	Low	0.24			
155, 156, 157----	0-23	28-35	1.35-1.45	0.2-0.6	0.19-0.21	6.1-7.3	<2	Moderate	0.37	5	5	2-4
Newell	23-34	28-35	1.40-1.50	0.2-0.6	0.19-0.21	6.6-7.8	<2	Moderate	0.37			
	34-60	28-35	1.40-1.50	0.2-0.6	0.19-0.21	6.6-8.4	<2	Moderate	0.49			
158	0-12	27-35	1.40-1.60	0.2-2.0	0.13-0.17	6.1-7.3	<2	Low	0.32	5	5	2-3
Newell	12-39	28-35	1.50-1.70	0.2-0.6	0.13-0.17	6.6-7.3	<2	Moderate	0.32			
	39-60	15-35	1.40-1.50	0.2-2.0	0.13-0.17	7.4-7.8	<2	Low	0.43			
159	0-8	5-10	1.60-1.70	2.0-6.0	0.11-0.13	6.1-8.4	<2	Low	0.28	1	3	.5-1
Notus	8-60	2-7	1.60-1.70	>20	0.03-0.05	6.1-8.4	<2	Low	0.05			
160	0-12	8-18	1.30-1.40	0.6-2.0	0.19-0.21	7.9-8.4	<2	Low	0.49	5	4L	1-2
Nyssaton	12-60	8-18	1.30-1.40	0.06-0.2	0.19-0.21	7.9-9.0	<2	Low	0.43			
161*:												
Odarmott	0-6	27-35	1.40-1.50	0.2-0.6	0.16-0.20	6.1-6.5	<2	Moderate	0.24	2	6	3-5
	6-34	30-55	1.40-1.50	0.2-0.6	0.14-0.21	6.1-6.5	<2	High	0.15			
	34-60	0-7	1.50-1.70	>20	0.01-0.04	6.1-6.5	<2	Low	0.10			
Appledallia	0-10	27-40	1.30-1.50	0.2-0.6	0.19-0.21	6.6-7.3	<2	Moderate	0.24	2	6	1-3
	10-32	40-50	1.40-1.50	0.06-0.2	0.10-0.16	6.6-7.3	<2	High	0.20			
	32-33	---	---	---	---	---	---	---	---			
	33-60	0-2	1.50-1.70	>20	---	6.6-8.4	<2	Low	0.02			
162	0-4	10-25	1.30-1.50	0.6-2.0	0.08-0.10	6.6-7.3	<2	Low	0.20	2	8	1-2
Oldsferry	4-28	10-25	1.35-1.55	0.6-2.0	0.05-0.08	6.6-7.3	<2	Low	0.10			
	28	---	---	---	---	---	---	---	---			
163	0-6	10-15	1.15-1.30	0.6-2.0	0.19-0.21	6.6-7.8	<2	Low	0.43	5	5	2-3
Onyx	6-60	10-18	1.25-1.35	0.6-2.0	0.19-0.21	6.6-7.8	<2	Low	0.43			
164, 165, 166, 167, 168	0-12	10-18	1.20-1.40	0.6-2.0	0.19-0.21	6.6-8.4	<2	Low	0.49	5	5	.5-2
Owyhee	12-60	10-18	1.20-1.40	0.06-0.2	0.14-0.18	7.9-8.4	<2	Low	0.55			

See footnote at end of table.

Table 14.--Physical and Chemical Properties of the Soils--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Salinity	Shrink-swell potential	Erosion factors K	Erosion factors T	Wind erodibility group	Organic matter
	In	Pct	G/cc	In/hr	In/in	pH	mmhos/cm					Pct
169----------	0-12	8-18	1.35-1.55	0.6-2.0	0.14-0.18	7.4-8.4	<2	Low-------	0.32	3	4L	1-2
Paniogue	12-32	6-14	1.40-1.60	0.6-2.0	0.14-0.18	7.4-8.4	<2	Low-------	0.32			
	32-60	0-5	1.60-1.70	>20	0.05-0.08	7.4-9.0	<2	Low-------	0.05			
170, 171---------	0-10	8-12	1.20-1.40	2.0-6.0	0.11-0.13	6.6-8.4	<2	Low-------	0.32	5	3	1-2
Payette	10-26	12-18	1.20-1.45	2.0-6.0	0.11-0.18	6.6-8.4	<2	Low-------	0.32			
	26-60	5-10	1.35-1.55	>20	0.04-0.08	6.6-8.4	<2	Low-------	0.17			
172*:												
Payette---------	0-10	8-12	1.20-1.40	2.0-6.0	0.11-0.13	6.6-8.4	<2	Low-------	0.32	5	3	1-2
	10-26	12-18	1.20-1.45	2.0-6.0	0.11-0.18	6.6-8.4	<2	Low-------	0.32			
	26-60	5-10	1.35-1.55	>20	0.04-0.08	6.6-8.4	<2	Low-------	0.17			
Van Dusen-------	0-14	12-20	1.10-1.30	0.6-2.0	0.16-0.21	6.1-7.8	<2	Low-------	0.24	4	5	3-5
	14-20	20-27	1.20-1.40	0.6-2.0	0.16-0.18	6.1-7.8	<2	Moderate	0.32			
	20-32	22-30	1.40-1.50	0.2-0.6	0.14-0.21	6.1-7.8	<2	Moderate	0.32			
	32-60	10-18	1.50-1.70	0.2-0.6	0.11-0.18	6.6-7.8	<2	Low-------	0.32			
173*, 174*, 175*:												
Power-----------	0-12	18-22	1.30-1.50	0.6-2.0	0.19-0.21	6.6-7.8	<2	Low-------	0.43	5	6	1-2
	12-31	24-35	1.20-1.50	0.2-0.6	0.16-0.21	6.6-8.4	<2	Moderate	0.43			
	31-60	15-20	1.35-1.55	0.6-2.0	0.16-0.18	7.9-9.0	<2	Low-------	0.37			
Purdam----------	0-12	20-25	1.50-1.60	0.6-2.0	0.19-0.21	6.6-7.3	<2	Low-------	0.43	2	6	1-2
	12-22	25-32	1.40-1.60	0.2-0.6	0.19-0.21	6.6-8.4	<2	Moderate	0.37			
	22-27	12-25	1.50-1.60	0.6-2.0	0.16-0.21	7.4-8.4	<2	Low-------	0.37			
	27-35	---	---	---	---	---	---	----------	----			
	35-60	5-15	1.60-1.75	2.0-6.0	---	7.4-8.4	<2	Low-------	0.28			
176, 177, 178----	0-4	15-25	1.30-1.50	0.2-0.6	0.06-0.09	6.1-7.3	<2	Low-------	0.10	1	8	2-4
Riggins	4-19	27-35	1.40-1.60	0.2-0.6	0.04-0.08	6.1-7.3	<2	Low-------	0.15			
	19	---	---	---	---	---	---	----------	----			
179.												
Riverwash												
180*:												
Rock outcrop.												
Bakeoven--------	0-3	15-25	1.25-1.35	0.2-0.6	0.06-0.09	6.1-7.8	<2	Low-------	0.05	1	8	1-3
	3-9	18-33	1.30-1.40	0.2-0.6	0.05-0.14	6.6-7.8	<2	Low-------	0.10			
	9	---	---	---	---	---	---	----------	----			
181----------	0-2	18-27	1.20-1.35	0.6-2.0	0.07-0.12	6.1-7.3	<2	Low-------	0.15	1	8	2-4
Rockly	2-8	27-35	1.20-1.35	0.2-0.6	0.08-0.13	6.1-7.3	<2	Low-------	0.10			
	8	---	---	---	---	---	---	----------	----			
182*:												
Rockly----------	0-3	18-27	1.30-1.40	0.6-2.0	0.06-0.11	6.1-7.3	<2	Low-------	0.10	1	8	2-4
	3-8	20-30	1.40-1.50	0.2-0.6	0.06-0.11	6.1-7.3	<2	Low-------	0.10			
	8	---	---	---	---	---	---	----------	----			
Riggins---------	0-4	15-25	1.30-1.50	0.2-0.6	0.06-0.09	6.1-7.3	<2	Low-------	0.10	1	8	2-4
	4-19	27-35	1.40-1.60	0.2-0.6	0.04-0.08	6.1-7.3	<2	Low-------	0.15			
	19	---	---	---	---	---	---	----------	----			
183*:												
Rockly----------	0-3	20-27	1.25-1.35	0.6-2.0	0.06-0.08	6.1-7.3	<2	Low-------	0.10	1	8	1-3
	3-8	20-30	1.30-1.40	0.2-0.6	0.06-0.11	6.1-7.3	<2	Low-------	0.10			
	8	---	---	---	---	---	---	----------	----			

See footnote at end of table.

Table 14.--Physical and Chemical Properties of the Soils--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Salinity	Shrink-swell potential	Erosion factors K	Erosion factors T	Wind erodibility group	Organic matter
	In	Pct	G/cc	In/hr	In/in	pH	mmhos/cm					Pct
183*:												
Riggins	0-4	15-25	1.30-1.50	0.2-0.6	0.06-0.09	6.1-7.3	<2	Low	0.10	1	8	2-4
	4-19	27-35	1.40-1.60	0.2-0.6	0.04-0.08	6.1-7.3	<2	Low	0.15			
	19	---	---	---	---	---	---	---	---			
184*:												
Rockly	0-3	18-27	1.20-1.35	0.6-2.0	0.07-0.12	6.1-7.3	<2	Low	0.15	1	8	2-4
	3-8	27-35	1.20-1.35	0.2-0.6	0.08-0.13	6.1-7.3	<2	Low	0.10			
	8	---	---	---	---	---	---	---	---			
Rock outcrop.												
185*:												
Rockly	0-3	18-27	1.20-1.35	0.6-2.0	0.07-0.12	6.1-7.3	<2	Low	0.15	1	8	2-4
	3-8	27-35	1.20-1.35	0.2-0.6	0.08-0.13	6.1-7.3	<2	Low	0.10			
	8	---	---	---	---	---	---	---	---			
Starveout	0-3	18-24	1.40-1.60	0.6-2.0	0.15-0.17	6.1-7.3	<2	Low	0.28	5	6	2-4
	3-21	30-35	1.50-1.70	0.2-0.6	0.17-0.18	6.6-7.8	<2	Moderate	0.32			
	21-60	30-45	1.30-1.50	0.2-0.6	0.16-0.18	6.6-7.8	<2	High	0.32			
McDaniel	0-5	15-20	1.10-1.30	0.6-2.0	0.16-0.18	6.6-7.3	<2	Low	0.20	5	7	2-4
	5-60	30-35	1.30-1.40	0.2-0.6	0.08-0.11	6.6-7.3	<2	Moderate	0.10			
186	0-26	8-15	1.25-1.45	2.0-6.0	0.12-0.17	5.1-6.0	<2	Low	0.28	5	6	3-6
Roseberry	26-40	0-15	1.40-1.60	2.0-6.0	0.06-0.09	5.1-6.0	<2	Low	0.10			
	40-55	5-18	1.40-1.60	2.0-6.0	0.11-0.16	5.1-6.0	<2	Low	0.20			
	55-60	0-7	1.50-1.65	6.0-20	0.02-0.04	5.1-6.0	<2	Low	0.05			
187*, 188*:												
Shellrock	0-10	0-10	1.45-1.65	6.0-20	0.08-0.12	6.1-7.3	<2	Low	0.17	3	3	2-3
	10-31	0-10	1.50-1.70	6.0-20	0.06-0.10	6.1-7.3	<2	Low	0.17			
	31-42	0-5	1.50-1.70	>20	0.02-0.04	6.1-7.3	<2	Low	0.10			
	42	---	---	---	---	---	---	---	---			
Rock outcrop.												
189	0-21	16-24	1.40-1.60	0.6-2.0	0.15-0.17	6.6-7.8	<2	Low	0.28	5	5	3-5
Shoepeg	21-48	18-35	1.40-1.70	0.6-2.0	0.15-0.21	6.6-7.8	<2	Moderate	0.32			
	48-60	5-20	1.40-1.60	2.0-6.0	0.06-0.14	6.6-7.8	<2	Low	0.24			
190	0-26	27-35	1.50-1.70	0.2-0.6	0.18-0.21	6.6-7.8	<2	Moderate	0.32	5	7	3-5
Shoepeg	26-60	18-35	1.40-1.70	0.6-2.0	0.15-0.21	6.6-7.8	<2	Moderate	0.32			
191*:												
Starveout	0-3	18-24	1.40-1.60	0.6-2.0	0.15-0.17	6.1-7.3	<2	Low	0.28	5	6	2-4
	3-21	30-35	1.50-1.70	0.2-0.6	0.17-0.18	6.6-7.8	<2	Moderate	0.32			
	21-60	30-45	1.30-1.50	0.2-0.6	0.16-0.18	6.6-7.8	<2	High	0.32			
Gwin	0-5	8-18	1.20-1.35	0.6-2.0	0.09-0.13	6.6-7.3	0-0	Low	0.20	1	8	2-4
	5-12	20-27	1.25-1.40	0.6-2.0	0.06-0.10	6.6-7.3	0-0	Low	0.10			
	12-20	28-35	1.30-1.45	0.2-0.6	0.05-0.10	6.6-7.3	0-0	Moderate	0.10			
	20	---	---	2.0-20	---	---	---	---	---			
McDaniel	0-5	15-20	1.10-1.30	0.6-2.0	0.16-0.18	6.6-7.3	<2	Low	0.20	5	7	2-4
	5-60	30-35	1.30-1.40	0.2-0.6	0.08-0.11	6.6-7.3	<2	Moderate	0.10			
192	0-18	15-25	1.20-1.50	0.6-2.0	0.18-0.20	6.1-7.3	<2	Low	0.28	5	6	2-5
Sudpeak	18-28	28-35	1.30-1.50	0.2-0.6	0.19-0.21	6.1-7.3	<2	Moderate	0.37			
	28-60	35-45	1.40-1.50	0.06-0.2	0.14-0.17	6.1-7.3	<2	High	0.43			

See footnote at end of table.

Table 14.--Physical and Chemical Properties of the Soils--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Salinity	Shrink-swell potential	Erosion factors		Wind erodibility group	Organic matter
									K	T		
	In	Pct	G/cc	In/hr	In/in	pH	mmhos/cm					Pct
193----------	0-24	5-25	1.25-1.45	0.6-2.0	0.16-0.21	6.1-6.5	<2	Low-------	0.43	4	6	2-4
Swede	24-52	27-35	1.30-1.50	0.2-0.6	0.19-0.21	6.1-6.5	<2	Moderate	0.37			
	52-60	27-40	1.35-1.55	0.2-0.6	0.16-0.21	6.1-6.5	<2	Moderate	0.24			
194----------	0-3	18-25	1.20-1.30	0.6-2.0	0.10-0.18	5.6-6.0	<2	Low-------	0.32	2	6	.5-1
Tamred	3-7	18-25	1.20-1.30	0.6-2.0	0.10-0.15	5.6-6.0	<2	Low-------	0.20			
	7-21	28-35	1.30-1.45	0.2-0.6	0.05-0.08	5.6-6.0	<2	Low-------	0.10			
	21	---	---	---	---	---	---	----------	----			
195----------	0-5	20-25	1.20-1.30	0.6-2.0	0.07-0.10	6.1-7.3	<2	Low-------	0.17	1	8	2-4
Ticanot	5-15	35-45	1.25-1.40	0.06-0.2	0.07-0.10	6.1-7.3	<2	High------	0.20			
	15	---	---	---	---	---	---	----------	----			
196*, 197*, 198*:												
Tindahay--------	0-12	4-8	1.45-1.55	6.0-20	0.06-0.08	6.6-7.8	<2	Low-------	0.20	2	2	.3-1
	12-17	12-18	1.35-1.45	2.0-6.0	0.11-0.13	6.6-7.8	<2	Low-------	0.28			
	17-60	0-8	1.45-1.60	>20	0.03-0.08	6.6-8.4	<2	Low-------	0.10			
Cashmere--------	0-11	5-10	1.10-1.30	2.0-6.0	0.13-0.16	6.1-7.8	<2	Low-------	0.32	4	3	1-2
	11-60	5-12	1.30-1.50	2.0-6.0	0.12-0.14	6.6-7.8	<2	Low-------	0.37			
199----------	0-10	0-1	1.60-1.75	>6.0	0.01-0.02	6.6-7.8	<2	Low-------	0.02	5	8	<.5
Typic Xerofluvents	10-60	0-1	1.60-1.80	>20	0.01-0.03	7.4-9.0	<2	Low-------	0.02			
200*:												
Van Dusen-------	0-14	12-20	1.10-1.30	0.6-2.0	0.16-0.21	6.1-7.8	<2	Low-------	0.24	4	5	3-5
	14-20	20-27	1.20-1.40	0.6-2.0	0.16-0.18	6.1-7.8	<2	Moderate	0.32			
	20-32	22-30	1.40-1.50	0.2-0.6	0.14-0.21	6.1-7.8	<2	Moderate	0.32			
	32-60	10-18	1.50-1.70	0.2-0.6	0.11-0.18	6.6-7.8	<2	Low-------	0.32			
Haw----------	0-17	10-20	1.25-1.35	0.6-2.0	0.16-0.21	6.1-7.8	<2	Low-------	0.43	4	5	2-4
	17-38	22-34	1.30-1.45	0.2-0.6	0.14-0.21	6.1-7.8	<2	Moderate	0.37			
	38-60	10-25	1.35-1.45	6.0-20	0.11-0.18	7.4-9.0	<2	Low-------	0.28			
201----------	0-10	8-15	1.20-1.40	0.6-2.0	0.17-0.19	5.6-6.5	<2	Low-------	0.37	3	8	2-4
Wapshilla	10-21	12-22	1.20-1.40	0.6-2.0	0.10-0.14	5.6-7.3	<2	Low-------	0.17			
	21-60	20-35	1.25-1.45	0.6-2.0	0.06-0.08	5.6-7.3	<2	Moderate	0.15			

* See description of the map unit for composition and behavior characteristics of the map unit.

Table 15.--Water Features

("Flooding" and "water table" and terms such as "rare," "brief," "apparent," and "perched" are explained in the text. The symbol < means less than; > means more than. Absence of an entry indicates that the feature is not a concern or that data were not estimated)

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth	Kind	Months
					Ft		
1---------- Abo	C	None----------	---	---	3.0-5.0	Apparent	May-Sep
2, 3---------- Agardelly	D	None----------	---	---	>6.0	---	---
4*, 5*: Agardelly----------	D	None----------	---	---	>6.0	---	---
Devnot----------	D	None----------	---	---	>6.0	---	---
6, 7, 8---------- Appledallia	C	None----------	---	---	>6.0	---	---
9*, 10*: Appledallia----------	C	None----------	---	---	>6.0	---	---
Appleshall----------	D	None----------	---	---	>6.0	---	---
11*, 12*: Appledallia----------	C	None----------	---	---	>6.0	---	---
Odermott----------	C	None----------	---	---	>6.0	---	---
13*: Bakeoven----------	D	None----------	---	---	>6.0	---	---
Reywat----------	D	None----------	---	---	>6.0	---	---
14*: Bakeoven----------	D	None----------	---	---	>6.0	---	---
Reywat----------	D	None----------	---	---	>6.0	---	---
Rock outcrop.							
15, 16---------- Baldock	C	Rare----------	---	---	2.0-3.0	Apparent	Aug-Nov
17, 18---------- Bissell	B	None----------	---	---	>6.0	---	---
19---------- Blackwell	D	Frequent--------	Very brief to brief.	Apr-Jun	0.2-2.5	Apparent	Mar-Jul
20, 21---------- Bluebell	C	None----------	---	---	>6.0	---	---
22---------- Bluesprin	C	None----------	---	---	>6.0	---	---
23*: Brody----------	C	None----------	---	---	>6.0	---	---
Culdecole----------	B	None----------	---	---	>6.0	---	---

See footnote at end of table.

Table 15.--Water Features--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth	Kind	Months
					Ft		
24, 25, 26, 27---------- Brownlee	B	None----------	---	---	>6.0	---	---
28---------- Bryan	A	None----------	---	---	>6.0	---	---
29---------- Cabarton	D	Frequent--------	Brief---------	May-Jun	0.5-1.5	Apparent	Mar-Jul
30, 31---------- Cashmere	B	None----------	---	---	>6.0	---	---
32---------- Catherine	C	Occasional------	Brief---------	Dec-May	1.5-4.0	Apparent	Dec-Jun
33*:							
Chilcott----------	D	None----------	---	---	>6.0	---	---
Vickery----------	C	None----------	---	---	>6.0	---	---
34, 35---------- Clems	B	None----------	---	---	>6.0	---	---
36---------- Cranecreek	C	None----------	---	---	>6.0	---	---
37*:							
Cranecreek----------	C	None----------	---	---	>6.0	---	---
Reywat----------	D	None----------	---	---	>6.0	---	---
38*:							
Culdecole----------	B	None----------	---	---	>6.0	---	---
Brody----------	C	None----------	---	---	>6.0	---	---
39---------- Dagor	B	None----------	---	---	>6.0	---	---
40, 41---------- Demast	B	None----------	---	---	>6.0	---	---
42, 43---------- Demasters	B	None----------	---	---	>6.0	---	---
44---------- Demoss	D	None----------	---	---	>6.0	---	---
45, 46, 47, 48, 49, 50-- Deshler	C	None----------	---	---	>6.0	---	---
51*, 52*, 53*, 54*:							
Deshler----------	C	None----------	---	---	>6.0	---	---
Agardelly----------	D	None----------	---	---	>6.0	---	---
55*, 56*, 57*:							
Deshler----------	C	None----------	---	---	>6.0	---	---
Brownlee----------	B	None----------	---	---	>6.0	---	---

See footnote at end of table.

Table 15.--Water Features--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth	Kind	Months
					Ft		
58*, 59*:							
Deshler	C	None	---	---	>6.0	---	---
Devnot	D	None	---	---	>6.0	---	---
60, 61	C	None	---	---	>6.0	---	---
Peterson							
62*:							
Dishner	D	None	---	---	>6.0	---	---
Haw	B	None	---	---	>6.0	---	---
63	B	None	---	---	>6.0	---	---
Donnal							
64.							
Dunelend							
65, 66	C	None	---	---	>6.0	---	---
Elijah							
67	C	Rare	---	---	3.0-5.0	Apparent	Apr-Oct
Falk							
68, 69, 70	D	None	---	---	>6.0	---	---
Gem							
71*, 72*:							
Gem	D	None	---	---	>6.0	---	---
Bakeoven	D	None	---	---	>6.0	---	---
73*, 74*:							
Gem	D	None	---	---	>6.0	---	---
Reywat	D	None	---	---	>6.0	---	---
75, 76	B	Rare	---	---	3.0-4.0	Apparent	Apr-Jul
Gestrin							
77, 78, 79	C	None	---	---	>6.0	---	---
Glasgow							
80*, 81*:							
Glasgow	C	None	---	---	>6.0	---	---
Lankbush	B	None	---	---	>6.0	---	---
82, 83, 84, 85	B	None	---	---	>6.0	---	---
Greenleaf							
86, 87	C	None	---	---	>6.0	---	---
Gross							
88*, 89*:							
Gross	C	None	---	---	>6.0	---	---
Bakeoven	D	None	---	---	>6.0	---	---

See footnote at end of table.

Table 15.--Water Features--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth	Kind	Months
					Ft		
90*:							
Gwin	D	None	---	---	>6.0	---	---
Rock outcrop.							
91, 92	B	None	---	---	>6.0	---	---
Harpt							
93, 94, 95, 96	B	None	---	---	>6.0	---	---
Haw							
97, 98, 99, 100, 101	C	None	---	---	>6.0	---	---
Jacknife							
102	D	None	---	---	>6.0	---	---
Jenny							
103	B	None	---	---	>6.0	---	---
Johnson							
104	B	None	---	---	>6.0	---	---
Jughandle							
105*:							
Jughandle	B	None	---	---	>6.0	---	---
Suttler	B	None	---	---	>6.0	---	---
106	A	Rare	---	---	>6.0	---	---
Kangas							
107	C	None	---	---	>6.0	---	---
Klicker							
108	B	None	---	---	>6.0	---	---
Klickson							
109*:							
Klickson	B	None	---	---	>6.0	---	---
Rock outcrop.							
110, 111	B	Rare	---	---	>6.0	---	---
Langrell							
112, 113, 114, 115	B	None	---	---	>6.0	---	---
Lankbush							
116, 117, 118, 119	C	None	---	---	>6.0	---	---
Lanktree							
120*:							
Lanktree	C	None	---	---	>6.0	---	---
Lankbush	B	None	---	---	>6.0	---	---
121, 122	B	None	---	---	>6.0	---	---
Ligget							
123, 124, 125	B	None	---	---	>6.0	---	---
Lolalita							

See footnote at end of table.

Table 15.--Water Features--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth	Kind	Months
					Ft		
126*:							
Lolalita	B	None	---	---	>6.0	---	---
Glasgow	C	None	---	---	>6.0	---	---
127*:							
Lolalita	B	None	---	---	>6.0	---	---
Saralegui	B	None	---	---	>6.0	---	---
128*, 129*:							
Lorella	D	None	---	---	>6.0	---	---
Rock outcrop.							
130 McDaniel	B	None	---	---	>6.0	---	---
131*:							
McDaniel	B	None	---	---	>6.0	---	---
Rockly	D	None	---	---	>6.0	---	---
132*:							
McDaniel	B	None	---	---	>6.0	---	---
Starveout	B	None	---	---	>6.0	---	---
133, 134, 135, 136 Meland	C	None	---	---	>6.0	---	---
137*, 138*:							
Meland	C	None	---	---	>6.0	---	---
Riggins	D	None	---	---	>6.0	---	---
139 Melton	D	Frequent	Brief	May-Jul	1.0-2.0	Apparent	Apr-Jul
140*:							
Melton	D	Frequent	Brief	May-Jul	1.0-2.0	Apparent	Apr-Jul
Roseberry	C	Occasional	Brief	May-Jun	1.5-2.5	Apparent	Apr-Jul
141, 142, 143, 144, 145- Midvale	C	None	---	---	>6.0	---	---
146*:							
Midvale	C	None	---	---	>6.0	---	---
Demoss	D	None	---	---	>6.0	---	---
147*:							
Molly	B	None	---	---	>6.0	---	---
Littlesalmon	A	None	---	---	>6.0	---	---
148*:							
Molly	B	None	---	---	>6.0	---	---
Littlesalmon	A	None	---	---	>6.0	---	---

See footnote at end of table.

Table 15.--Water Features--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth	Kind	Months
					Ft		
148*: Rock outcrop.							
149 Moonstone	C	None	---	---	>6.0	---	---
150, 151 Moulton	C	Rare	---	---	1.5-3.0	Apparent	Jan-Dec
152*: Moulton	C	Rare	---	---	1.5-3.0	Apparent	Jan-Dec
Falk	C	Rare	---	---	3.0-5.0	Apparent	Apr-Oct
153*: Mulett	D	None	---	---	>6.0	---	---
Mackey	C	None	---	---	>6.0	---	---
154*: Nazaton	B	None	---	---	>6.0	---	---
Naz	B	None	---	---	>6.0	---	---
155, 156, 157, 158 Newell	B	None	---	---	>6.0	---	---
159 Notus	C	Occasional	Brief	Mar-May	3.0-5.0	Apparent	Mar-Sep
160 Nyssaton	B	None	---	---	>6.0	---	---
161*: Odermott	C	None	---	---	>6.0	---	---
Appledellia	C	None	---	---	>6.0	---	---
162 Oldsferry	C	None	---	---	>6.0	---	---
163 Onyx	B	None	---	---	>6.0	---	---
164, 165, 166, 167, 168 Owyhee	B	None	---	---	>6.0	---	---
169 Paniogue	B	None	---	---	>6.0	---	---
170, 171 Payette	B	None	---	---	>6.0	---	---
172*: Payette	B	None	---	---	>6.0	---	---
Van Dusen	B	None	---	---	>6.0	---	---
173*, 174*, 175*: Power	B	None	---	---	>6.0	---	---

See footnote at end of table.

Table 15.--Water Features--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth	Kind	Months
					Ft		
173*, 174*, 175*: Purdam	C	None	---	---	>6.0	---	---
176, 177, 178 Riggins	D	None	---	---	>6.0	---	---
179. Riverwash							
180*: Rock outcrop.							
Bakeoven	D	None	---	---	>6.0	---	---
181 Rockly	D	None	---	---	>6.0	---	---
182*, 183*:							
Rockly	D	None	---	---	>6.0	---	---
Riggins	D	None	---	---	>6.0	---	---
184*:							
Rockly	D	None	---	---	>6.0	---	---
Rock outcrop.							
185*:							
Rockly	D	None	---	---	>6.0	---	---
Starveout	B	None	---	---	>6.0	---	---
McDaniel	B	None	---	---	>6.0	---	---
186 Roseberry	C	Occasional	Brief	May-Jun	1.5-2.5	Apparent	Apr-Jul
187*, 188*:							
Shellrock	A	None	---	---	>6.0	---	---
Rock outcrop.							
189, 190 Shoepeg	C	Rare	---	---	2.0-3.0	Apparent	Apr-Sep
191*:							
Starveout	B	None	---	---	>6.0	---	---
Gwin	D	None	---	---	>6.0	---	---
McDaniel	B	None	---	---	>6.0	---	---
192 Sudpeak	C	None	---	---	3.0-6.0	Perched	May-Jul
193 Swede	B	None	---	---	>6.0	---	---
194 Tamrad	C	None	---	---	>6.0	---	---

See footnote at end of table.

Table 15.--Water Features--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth	Kind	Months
					Ft		
195---------- Ticanot	D	None----------	---	---	>6.0	---	---
196*, 197*, 198*:							
Tindahay----------	B	None----------	---	---	>6.0	---	---
Cashmere----------	B	None----------	---	---	>6.0	---	---
199---------- Typic Xerofluvents	C	Frequent--------	Long----------	Feb-Aug	2.0-5.0	Apparent	Feb-Jun
200*:							
Van Dusen----------	B	None----------	---	---	>6.0	---	---
Haw----------	B	None----------	---	---	>6.0	---	---
201---------- Wapshilla	B	None----------	---	---	>6.0	---	---

* See description of the map unit for composition and behavior characteristics of the map unit.

Table 16.--Soil Features

(The symbol < means less than; > means more than. Absence of an entry indicates that the feature is not a concern or that data were not estimated)

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Thickness		Uncoated steel	Concrete
	In		In				
1---------- Abo	>60	---	---	---	Moderate	High-----	Low.
2, 3---------- Agardelly	>60	---	---	---	Low------	High-----	Low.
4*, 5*: Agardelly----------	>60	---	---	---	Low------	High-----	Low.
Devnot----------	10-20	Hard	---	---	Low------	High-----	Low.
6, 7, 8---------- Appledellia	>60	---	20-40	Thin	Moderate	High-----	Low.
9*, 10*: Appledellia----------	>60	---	20-40	Thin	Moderate	High-----	Low.
Appleshall----------	>60	---	10-20	Thin	Moderate	Moderate	Low.
11*, 12*: Appledellia----------	>60	---	20-40	Thin	Moderate	High-----	Low.
Odarmott----------	>60	---	---	---	Moderate	Moderate	Low.
13*: Bakeoven----------	4-10	Hard	---	---	Moderate	Moderate	Low.
Reywat----------	10-20	Hard	---	---	Moderate	Moderate	Low.
14*: Bakeoven----------	4-10	Hard	---	---	Moderate	Moderate	Low.
Reywat----------	10-20	Hard	---	---	Moderate	Moderate	Low.
Rock outcrop.							
15, 16---------- Baldock	>60	---	---	---	High-----	High-----	Low.
17, 18---------- Bissell	>60	---	---	---	Moderate	Moderate	Low.
19---------- Blackwell	>60	---	---	---	High-----	Moderate	Moderate.
20, 21---------- Bluebell	20-40	Hard	---	---	Moderate	Moderate	Moderate.
22---------- Bluesprin	20-40	Hard	---	---	Moderate	Moderate	Low.
23*: Brody----------	20-40	Hard	---	---	Moderate	Low------	Low.
Culdecole----------	40-60	Hard	---	---	Moderate	Moderate	Moderate.

See footnote at end of table.

Table 16.--Soil Features--Continued

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Thickness		Uncoated steel	Concrete
	In		In				
24, 25, 26, 27---------- Brownlee	>60	---	---	---	Moderate	Moderate	Moderate.
28---------- Bryan	>60	---	---	---	Low------	Moderate	Moderate.
29---------- Cabarton	>60	---	---	---	High-----	Moderate	Moderate.
30, 31---------- Cashmere	>60	---	---	---	Moderate	High-----	Low.
32---------- Catherine	>60	---	---	---	High-----	Moderate	Low.
33*: Chilcott----------	>60	---	20-40	Thick	Low------	High-----	Low.
Vickary----------	>60	---	20-40	Thick	Low------	High-----	Low.
34, 35---------- Clems	>60	---	---	---	Low------	High-----	Low.
36---------- Cranecreek	20-40	Soft	---	---	Moderate	Moderate	Low.
37*: Cranecreek----------	20-40	Soft	---	---	Moderate	Moderate	Low.
Reywat----------	10-20	Hard	---	---	Moderate	Moderate	Low.
38*: Culdecole----------	40-60	Hard	---	---	Moderate	Moderate	Moderate.
Brody----------	20-40	Hard	---	---	Moderate	Low------	Low.
39---------- Dagor	>60	---	---	---	Moderate	Moderate	Low.
40, 41---------- Demast	>60	---	---	---	Moderate	Moderate	Moderate.
42, 43---------- Demasters	40-60	Hard	---	---	Moderate	Moderate	Moderate.
44---------- Demoss	12-30	Soft	10-20	Thin	Moderate	Moderate	Low.
45, 46, 47, 48---------- Deshler	20-40	Soft	---	---	Moderate	Moderate	Low.
49, 50---------- Deshler	20-40	Soft	---	---	Moderate	High-----	Low.
51*, 52*: Deshler----------	20-40	Soft	---	---	Moderate	Moderate	Low.
Agerdally----------	>60	---	---	---	Low------	High-----	Low.
53*, 54*: Deshler----------	20-40	Soft	---	---	Moderate	High-----	Low.

See footnote at end of table.

Table 16.--Soil Features--Continued

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Thickness		Uncoated steel	Concrete
	In		In				
53*, 54*: Agerdelly	>60	---	---	---	Low	High	Low.
55*, 56*, 57*: Deshler	20-40	Soft	---	---	Moderate	Moderate	Low.
Brownlee	>60	---	---	---	Moderate	Moderate	Moderate.
58*, 59*: Deshler	20-40	Soft	---	---	Moderate	Moderate	Low.
Devnot	10-20	Hard	---	---	Low	High	Low.
60, 61 Deterson	>60	---	---	---	Moderate	High	Low.
62*: Dishner	10-20	Hard	---	---	Low	Moderate	Low.
Haw	>60	---	---	---	Low	High	Low.
63 Donnel	>60	---	---	---	Low	Moderate	Moderate.
64. Duneland							
65, 66 Elijah	>60	---	20-40	Thick	Low	High	Low.
67 Falk	>60	---	---	---	High	Moderate	Low.
68, 69, 70 Gem	20-40	Hard	---	---	Moderate	High	Low.
71*, 72*: Gem	20-40	Hard	---	---	Moderate	High	Low.
Bakeoven	4-10	Hard	---	---	Moderate	Moderate	Low.
73*, 74*: Gem	20-40	Hard	---	---	Moderate	High	Low.
Reywat	10-20	Hard	---	---	Moderate	Moderate	Low.
75, 76 Gestrin	>60	---	---	---	Moderate	Moderate	Moderate.
77, 78, 79 Glasgow	20-40	Hard	---	---	Moderate	High	Low.
80*, 81*: Glasgow	20-40	Hard	---	---	Moderate	High	Low.
Lankbush	>60	---	---	---	Low	High	Low.
82, 83, 84, 85 Greenleaf	>60	---	---	---	Low	High	Low.

See footnote at end of table.

Table 16.--Soil Features--Continued

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Thickness		Uncoated steel	Concrete
	In		In				
86, 87 Gross	20-40	Hard	---	---	Moderate	Moderate	Low.
88*, 89*:							
Gross	20-40	Hard	---	---	Moderate	Moderate	Low.
Bakeoven	4-10	Hard	---	---	Moderate	Moderate	Low.
90*:							
Gwin	10-20	Hard	---	---	Moderate	Moderate	Low.
Rock outcrop.							
91, 92 Harpt	>60	---	---	---	Moderate	High	Low.
93, 94, 95, 96 Haw	>60	---	---	---	Low	High	Low.
97, 98, 99, 100, 101 Jacknife	>60	---	---	---	Moderate	Moderate	Low.
102 Jenny	>60	---	---	---	Moderate	High	Low.
103 Johnson	40-60	Soft	---	---	Moderate	Moderate	Moderate.
104 Jughandle	40-60	Soft	---	---	Moderate	Moderate	Moderate.
105*:							
Jughandle	40-60	Soft	---	---	Moderate	Moderate	Moderate.
Suttler	40-60	Soft	---	---	Moderate	High	High.
106 Kangas	>60	---	---	---	Low	Moderate	Low.
107 Klicker	20-40	Hard	---	---	Moderate	Moderate	Low.
108 Klickson	>60	---	---	---	Moderate	Moderate	Low.
109*:							
Klickson	>60	---	---	---	Moderate	Moderate	Low.
Rock outcrop.							
110, 111 Langrell	>60	---	---	---	Moderate	Moderate	Low.
112, 113, 114, 115 Lankbush	>60	---	---	---	Low	High	Low.
116, 117, 118, 119 Lanktree	>60	---	---	---	Low	High	Low.
120*:							
Lanktree	>60	---	---	---	Low	High	Low.

See footnote at end of table.

Table 16.--Soil Features--Continued

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Thickness		Uncoated steel	Concrete
	In		In				
120*:							
Lankbush	>60	---	---	---	Low	High	Low.
121, 122--- Ligget	40-60	Soft	---	---	Moderate	High	High.
123, 124, 125--- Lolalita	>60	---	---	---	Low	Moderate	Low.
126*:							
Lolalita	>60	---	---	---	Low	Moderate	Low.
Glasgow	20-40	Hard	---	---	Moderate	High	Low.
127*:							
Lolalita	>60	---	---	---	Low	Moderate	Low.
Saralegui	>60	---	---	---	Low	High	Moderate.
128*, 129*:							
Lorella	10-20	Hard	---	---	Moderate	Moderate	Low.
Rock outcrop.							
130--- McDaniel	>60	---	---	---	Moderate	Moderate	Low.
131*:							
McDaniel	>60	---	---	---	Moderate	Moderate	Low.
Rockly	5-12	Hard	---	---	Moderate	Moderate	Low.
132*:							
McDaniel	>60	---	---	---	Moderate	Moderate	Low.
Starveout	>60	---	---	---	Moderate	Moderate	Low.
133, 134, 135, 136--- Meland	20-40	Hard	---	---	Moderate	Moderate	Moderate.
137*, 138*:							
Meland	20-40	Hard	---	---	Moderate	Moderate	Moderate.
Riggins	10-20	Hard	---	---	Moderate	Moderate	Low.
139--- Melton	>60	---	---	---	High	High	High.
140*:							
Melton	>60	---	---	---	High	High	High.
Roseberry	>60	---	---	---	High	Moderate	Moderate.
141, 142, 143, 144, 145--- Midvale	>60	---	---	---	Moderate	Moderate	Low.
146*:							
Midvale	>60	---	---	---	Moderate	Moderate	Low.
Demoss	12-30	Soft	10-20	Thin	Moderate	Moderate	Low.

See footnote at end of table.

Table 16.--Soil Features--Continued

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Thickness		Uncoated steel	Concrete
	In		In				
147*:							
Molly	40-60	Soft	---	---	Moderate	High	Moderate.
Littlesalmon	40-60	Soft	---	---	Low	Moderate	Moderate.
148*:							
Molly	40-60	Soft	---	---	Moderate	High	Moderate.
Littlesalmon	40-60	Soft	---	---	Low	Moderate	Moderate.
Rock outcrop.							
149 Moonstone	20-40	Soft	---	---	Moderate	Moderate	Low.
150, 151 Moulton	>60	---	---	---	High	Moderate	Low.
152*:							
Moulton	>60	---	---	---	High	Moderate	Low.
Falk	>60	---	---	---	High	Moderate	Low.
153*:							
Mulett	10-20	Hard	---	---	Moderate	High	Low.
Mackey	20-40	Hard	---	---	Moderate	High	Low.
154*:							
Nazaton	>60	---	---	---	Moderate	Moderate	Moderate.
Naz	>60	---	---	---	Moderate	Moderate	Moderate.
155, 156, 157 Newell	>60	---	---	---	Low	Moderate	Low.
158 Newell	>60	---	---	---	Low	High	Low.
159 Notus	>60	---	---	---	Moderate	Moderate	Low.
160 Nyssaton	>60	---	---	---	Low	High	Low.
161*:							
Odarmott	>60	---	---	---	Moderate	Moderate	Low.
Appledellia	>60	---	20-40	Thin	Moderate	High	Low.
162 Oldsferry	20-40	Hard	---	---	Moderate	Moderate	Low.
163 Onyx	>60	---	---	---	High	Moderate	Low.
164, 165, 166, 167, 168 Owyhee	>60	---	---	---	Low	High	Low.
169 Paniogue	>60	---	---	---	Moderate	High	Low.

See footnote at end of table.

Table 16.--Soil Features--Continued

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Thickness		Uncoated steel	Concrete
	In		In				
170, 171 Payette	>60	---	---	---	Moderate	Moderate	Low.
172*: Payette	>60	---	---	---	Moderate	Moderate	Low.
Van Dusen	>60	---	---	---	Moderate	Moderate	Low.
173*, 174*, 175*: Power	>60	---	---	---	Low	High	Low.
Purdam	>60	---	20-40	Thin	Low	High	Low.
176, 177, 178 Riggins	10-20	Hard	---	---	Moderate	Moderate	Low.
179. Riverwash							
180*: Rock outcrop.							
Bakeoven	4-10	Hard	---	---	Moderate	Moderate	Low.
181 Rockly	5-12	Hard	---	---	Moderate	Moderate	Low.
182*, 183*: Rockly	5-12	Hard	---	---	Moderate	Moderate	Low.
Riggins	10-20	Hard	---	---	Moderate	Moderate	Low.
184*: Rockly	5-12	Hard	---	---	Moderate	Moderate	Low.
Rock outcrop.							
185*: Rockly	5-12	Hard	---	---	Moderate	Moderate	Low.
Starveout	>60	---	---	---	Moderate	Moderate	Low.
McDaniel	>60	---	---	---	Moderate	Moderate	Low.
186 Roseberry	>60	---	---	---	High	Moderate	Moderate.
187*, 188*: Shellrock	40-60	Soft	---	---	Low	Moderate	Low.
Rock outcrop.							
189, 190 Shoepeg	>60	---	---	---	Moderate	Moderate	Low.
191*: Starveout	>60	---	---	---	Moderate	Moderate	Low.
Gwin	10-20	Hard	---	---	Moderate	Moderate	Low.
McDaniel	>60	---	---	---	Moderate	Moderate	Low.

See footnote at end of table.

Table 16.--Soil Features--Continued

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Thickness		Uncoated steel	Concrete
	In		In				
192---------- Sudpeak	>60	---	---	---	Moderate	Moderate	Low.
193---------- Swede	>60	---	---	---	Moderate	Moderate	Low.
194---------- Tamred	20-40	Hard	---	---	Moderate	Moderate	Moderate.
195---------- Ticanot	10-20	Hard	---	---	Moderate	Moderate	Moderate.
196*, 197*, 198*:							
Tindahay----------	>60	---	---	---	Low------	Moderate	Low.
Cashmere----------	>60	---	---	---	Moderate	High-----	Low.
199---------- Typic Xerofluvents	>60	---	---	---	---	High-----	Low.
200*:							
Van Dusen----------	>60	---	---	---	Moderate	Moderate	Low.
Haw----------	>60	---	---	---	Low------	High-----	Low.
201---------- Wapshilla	>60	---	---	---	Moderate	Moderate	Moderate.

* See description of the map unit for composition and behavior characteristics of the map unit.

Table 17.--Classification of the Soils

(An asterisk in the first column indicates that the soil is a taxadjunct to the series. See text for a description of those characteristics of the soil that are outside the range of the series)

Soil name	Family or higher taxonomic class
Abo	Fine-loamy, mixed, mesic Aquic Haplargids
Agardelly	Very-fine, montmorillonitic, mesic Entic Chromoxererts
Appledellia	Fine, montmorillonitic, mesic Typic Durixerolls
Appleshall	Loamy-skeletal, mixed, mesic, shallow Typic Durixerolls
Baksoven	Loamy-skeletal, mixed, mesic Lithic Haploxerolls
Baldock	Fine-loamy, mixed (calcareous), mesic Typic Haplaquepts
Bissell	Fine-loamy, mixed, mesic Aridic Argixerolls
*Blackwell	Fine-loamy, mixed Typic Cryaquolls
Bluebell	Loamy-skeletal, mixed Argic Pachic Cryoborolls
Bluesprin	Loamy-skeletal, mixed, mesic Ultic Argixerolls
Brody	Ashy-skeletal, mixed Typic Vitricryands
Brownlee	Fine-loamy, mixed, mesic Ultic Argixerolls
Bryan	Sandy, mixed Entic Cryumbrepts
Cabarton	Fine, montmorillonitic Typic Cryaquolls
Cashmere	Coarse-loamy, mixed, mesic Aridic Haploxerolls
Catherine	Fine-silty, mixed, mesic Cumulic Haplaquolls
Chilcott	Fine, montmorillonitic, mesic Abruptic Xerollic Durargids
Clems	Coarse-loamy, mixed, mesic Xerollic Camborthids
Cranecreek	Fine-loamy, mixed, mesic Mollic Haploxeralfs
Culdecole	Fine-loamy, mixed Andic Cryoboralfs
Dagor	Fine-loamy, mixed, mesic Cumulic Haploxerolls
*Demast	Fine-loamy, mixed Argic Pachic Cryoborolls
Demasters	Fine-loamy, mixed, frigid Pachic Ultic Argixerolls
Demoss	Fine-loamy, mixed, mesic, shallow Typic Durixerolls
Deshler	Fine, montmorillonitic, mesic Pachic Argixerolls
Determon	Fine, montmorillonitic, mesic Pachic Argixerolls
Devnot	Clayey, montmorillonitic, mesic Lithic Argixerolls
Dishner	Clayey, montmorillonitic, mesic Lithic Xerollic Haplargids
Domnel	Coarse-loamy, mixed Typic Cryumbrepts
Elijah	Fine-silty, mixed, mesic Xerollic Durargids
Falk	Coarse-loamy over sandy or sandy-skeletal, mixed, nonacid, mesic Aquic Xerorthents
Gem	Fine, montmorillonitic, mesic Calcic Argixerolls
Gestrin	Coarse-loamy, mixed Typic Cryumbrepts
Glasgow	Fine, montmorillonitic, mesic Xerollic Haplargids
Greenleaf	Fine-silty, mixed, mesic Xerollic Haplargids
Gross	Fine-loamy, mixed, frigid Calcic Pachic Argixerolls
Gwin	Loamy-skeletal, mixed, mesic Lithic Argixerolls
Harpt	Fine-loamy, mixed, mesic Torrifluventic Haploxerolls
Haw	Fine-loamy, mixed, mesic Aridic Calcic Argixerolls
Jacknife	Fine, montmorillonitic, mesic Pachic Argixerolls
Jenny	Fine, montmorillonitic, mesic Typic Chromoxererts
Johnson	Fine-loamy, mixed, frigid Ultic Argixerolls
Jughandle	Coarse-loamy, mixed Vitrandic Cryochrepts
Kangas	Sandy, mixed Entic Cryumbrepts
Klickar	Loamy-skeletal, mixed, frigid Ultic Argixerolls
Klickson	Loamy-skeletal, mixed, frigid Ultic Argixerolls
Langrell	Loamy-skeletal, mixed, mesic Pachic Haploxerolls
Lankbush	Fine-loamy, mixed, mesic Xerollic Haplargids
Lanktree	Fine, montmorillonitic, mesic Xerollic Haplargids
Ligget	Coarse-loamy, mixed Alfic Cryochrepts
Littlesalmon	Sandy-skeletal, mixed Andic Cryochrepts
Lolalita	Coarse-loamy, mixed, nonacid, mesic Xeric Torriorthents
Lorella	Clayey-skeletal, montmorillonitic, mesic Lithic Argixerolls
Macksy	Loamy-skeletal, mixed, mesic Xerollic Camborthids
McDaniel	Loamy-skeletal, mixed, mesic Pachic Argixerolls
Meland	Fine-loamy, mixed, mesic Ultic Argixerolls
*Melton	Fine-loamy over sandy or sandy-skeletal, mixed, acid Humic Cryaquepts
Midvale	Fine, montmorillonitic, mesic Typic Argixerolls
Molly	Coarse-loamy, mixed Andic Cryochrepts
Moonstone	Coarse-loamy, mixed, frigid Pachic Ultic Haploxerolls

Table 17.--Classification of the Soils--Continued

Soil name	Family or higher taxonomic class
*Moulton	Coarse-loamy over sandy or sandy-skeletal, mixed, mesic Typic Haplaquolls
Mulett	Loamy-skeletal, mixed, mesic Lithic Xerollic Camborthids
Naz	Coarse-loamy, mixed Pachic Cryoborolls
Nazatom	Loamy-skeletal, mixed Pachic Cryoborolls
Newell	Fine-loamy, mixed, mesic Calcic Pachic Argixerolls
Notus	Sandy-skeletal, mixed, mesic Aquic Xerofluvents
Nyssatom	Coarse-silty, mixed, mesic Xerollic Calciorthids
Odermott	Clayey over sandy or sandy-skeletal, montmorillonitic, mesic Typic Argixerolls
Oldsferry	Loamy-skeletal, mixed, mesic Typic Haploxerolls
Onyx	Coarse-silty, mixed, mesic Cumulic Haploxerolls
Owyhee	Coarse-silty, mixed, mesic Xerollic Camborthids
Paniogue	Coarse-loamy over sandy or sandy-skeletal, mixed, mesic Xerollic Camborthids
Payette	Coarse-loamy, mixed, mesic Aridic Calcic Argixerolls
Power	Fine-silty, mixed, mesic Xerollic Haplargids
Purdam	Fine-silty, mixed, mesic Haploxerollic Durargids
Reywat	Loamy-skeletal, mixed, mesic Lithic Argixerolls
Riggins	Loamy-skeletal, mixed, mesic Lithic Ultic Argixerolls
*Rockly	Loamy-skeletal, mixed, mesic Lithic Haploxerolls
Roseberry	Sandy, mixed Humic Cryaquepts
Saralegui	Coarse-loamy, mixed, mesic Xerollic Haplargids
Shellrock	Mixed, frigid Typic Xeropsamments
Shoepeg	Fine-loamy, mixed, mesic Cumulic Haploxerolls
Starveout	Fine-loamy, mixed, mesic Pachic Palexerolls
Sudpeak	Fine, montmorillonitic Argic Pachic Cryoborolls
Suttler	Coarse-loamy, mixed Typic Cryumbrepts
Swede	Fine-loamy, mixed Argic Cryoborolls
Tamred	Loamy-skeletal, mixed Mollic Cryoboralfs
Ticanot	Clayey-skeletal, montmorillonitic Argic Lithic Cryoborolls
Tindahay	Sandy, mixed, mesic Xeric Torriorthents
Typic Xerofluvents	Typic Xerofluvents
Van Dusen	Fine-loamy, mixed, mesic Pachic Argixerolls
Vickery	Fine-loamy, mixed, mesic Xerollic Durorthids
Wapshilla	Loamy-skeletal, mixed Mollic Cryoboralfs

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program information (e.g., Braille, large print, audiotape, etc.), please contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

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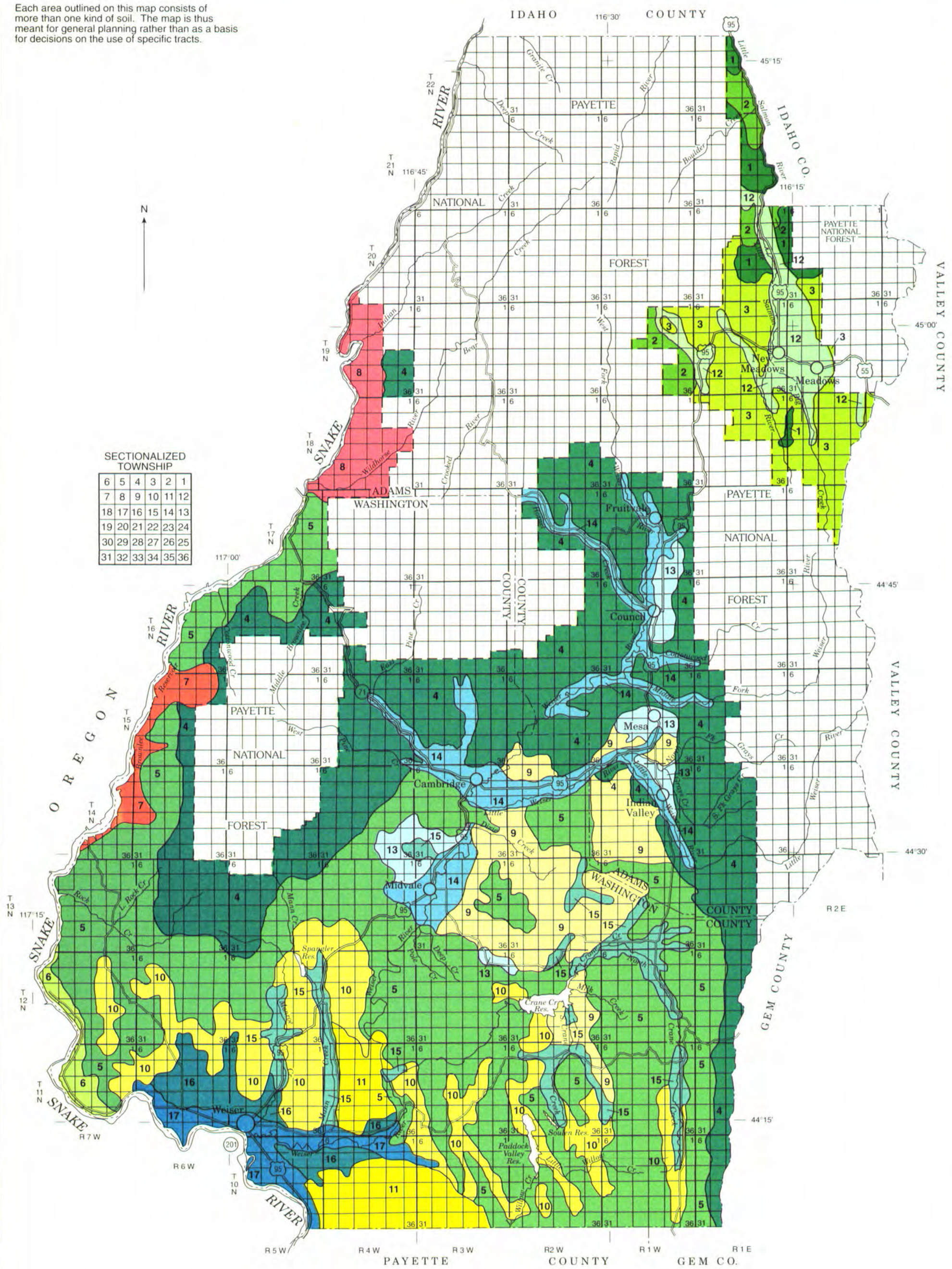
For additional information dealing with Supplemental Nutrition Assistance Program (SNAP) issues, call either the USDA SNAP Hotline Number at (800) 221-5689, which is also in Spanish, or the State Information/Hotline Numbers (http://directives.sc.egov.usda.gov/33085.wba).

All Other Inquiries

For information not pertaining to civil rights, please refer to the listing of the USDA Agencies and Offices (http://directives.sc.egov.usda.gov/33086.wba).

Each area outlined on this map consists of more than one kind of soil. The map is thus meant for general planning rather than as a basis for decisions on the use of specific tracts.



N

SECTIONALIZED TOWNSHIP

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

SOIL LEGEND*

SOILS ON MOUNTAINS AND FOOTHILLS AND IN CANYONS

1 Ligget-Jughandle-Molly
2 Brody-Culdecole-Tamred
3 Bluebell-Ticanot-Demast
4 Riggins-Meland-Demasters
5 Gem-Reywat-Bakeoven
6 Mulett-Mackey
7 Gross-Oldsferry
8 Rockly-McDaniel

SOILS ON FOOTHILLS AND TERRACES

9 Deshler-Brownlee-Cranecreek
10 Deshler-Agerdelly-Glasgow
11 Haw-Lankbush-Payette

SOILS ON FANS AND TERRACES

12 Swede-Blackwell-Melton
13 Midvale-Appledellia
14 Shoepeg-Langrell
15 Newell-Langrell
16 Greenleaf-Bissell
17 Baldock-Moulton-Cashmere

*The units on this legend are described in the text under the heading "General Soil Map Units."

Compiled 1994

UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE
BUREAU OF LAND MANAGEMENT
UNIVERSITY OF IDAHO, COLLEGE OF AGRICULTURE
IDAHO SOIL CONSERVATION COMMISSION

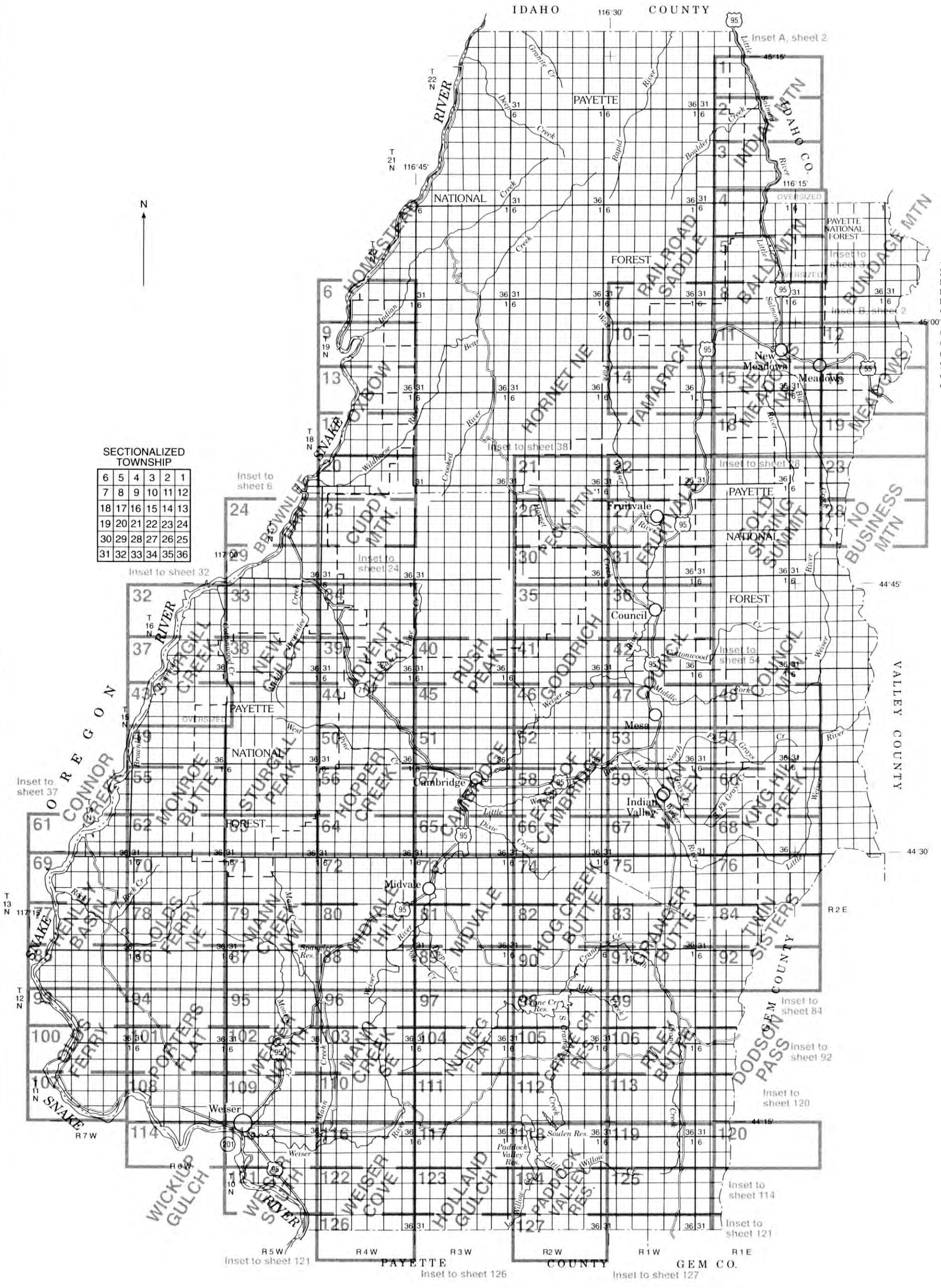
GENERAL SOIL MAP

ADAMS-WASHINGTON AREA, IDAHO

Scale 1:253,440

1 0 1 2 3 4 Miles

1 0 4 8 Km



Original text from each individual map sheet read:
Coordinate grid ticks and land division corners, if shown, are approximately positioned. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 and 1975 aerial photography. This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies.

INDEX TO MAP SHEETS

ADAMS-WASHINGTON AREA, IDAHO

Scale 1:253,440

1 0 1 2 3 4 Miles

1 0 4 8 Km

UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

ADAMS-WASHINGTON AREA, IDAHO
PARTS OF ADAMS AND WASHINGTON COUNTIES

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
UNIVERSITY OF IDAHO, COLLEGE OF AGRICULTURE
IDAHO SOIL CONSERVATION COMMISSION

SOIL LEGEND

This is an Order 2 soil survey on lands used dominantly for cropland and an Order 3 survey on lands used for rangeland and woodland.

The publication symbols for the map units are numerical. They correspond to the alphabetical list of map units.

SYMBOL	NAME
1	Abo silt loam, 0 to 2 percent slopes
2	Agerdelly clay, 4 to 30 percent slopes
3	Agerdelly clay, 30 to 60 percent slopes
4	Agerdelly-Devnot complex, 4 to 30 percent slopes
5	Agerdelly-Devnot complex, 30 to 60 percent slopes
6	Appledellia loam, 2 to 4 percent slopes
7	Appledellia loam, 4 to 8 percent slopes
8	Appledellia clay loam, 12 to 30 percent slopes
9	Appledellia-Appleshall complex, 2 to 15 percent slopes
10	Appledellia-Appleshall complex, moist, 2 to 15 percent slopes
11	Appledellia-Odermott complex, 2 to 4 percent slopes
12	Appledellia-Odermott complex, 4 to 8 percent slopes
13	Bakeoven-Reywat complex, 2 to 30 percent slopes
14	Bakeoven-Reywat-Rock outcrop complex, 30 to 60 percent slopes
15	Baldock silt loam, 0 to 2 percent slopes
16	Baldock clay loam, 0 to 2 percent slopes
17	Bissell loam, 0 to 2 percent slopes
18	Bissell loam, 2 to 4 percent slopes
19	Blackwell clay loam, 0 to 5 percent slopes
20	Bluebell cobbly loam, 5 to 35 percent slopes
21	Bluebell cobbly loam, 35 to 65 percent slopes
22	Bluesprin family, 30 to 60 percent slopes
23	Brody-Culdecole complex, 30 to 65 percent slopes
24	Brownlee sandy loam, 4 to 8 percent slopes
25	Brownlee sandy loam, 8 to 20 percent slopes
26	Brownlee sandy loam, 20 to 35 percent slopes
27	Brownlee loam, 1 to 4 percent slopes
28	Bryan coarse sandy loam, 40 to 60 percent slopes
29	Cabarton silty clay loam, 0 to 5 percent slopes
30	Cashmere sandy loam, 2 to 4 percent slopes
31	Cashmere sandy loam, 4 to 8 percent slopes
32	Catherine silt loam, 0 to 3 percent slopes
33	Chilcott-Vickery silt loams, 4 to 12 percent slopes
34	Clems fine sandy loam, 0 to 2 percent slopes
35	Clems fine sandy loam, 2 to 4 percent slopes
36	Cranecreek loam, 4 to 12 percent slopes
37	Cranecreek-Reywat complex, 2 to 25 percent slopes
38	Culdecole-Brody complex, 4 to 30 percent slopes
39	Dagor loam, 2 to 4 percent slopes
40	Demast loam, 10 to 30 percent slopes
41	Demast loam, 30 to 60 percent slopes
42	Demasters loam, 30 to 50 percent slopes
43	Demasters loam, 50 to 75 percent slopes
44	Demoss loam, 2 to 8 percent slopes
45	Deshler silty clay loam, 2 to 8 percent slopes
46	Deshler silty clay loam, 8 to 20 percent slopes
47	Deshler silty clay loam, 20 to 30 percent slopes
48	Deshler silty clay loam, 30 to 60 percent slopes
49	Deshler extremely stony clay loam, 2 to 30 percent slopes
50	Deshler extremely stony clay loam, 30 to 60 percent slopes
51	Deshler-Agerdelly complex, 8 to 30 percent slopes
52	Deshler-Agerdelly complex, 30 to 60 percent slopes
53	Deshler-Agerdelly complex, extremely stony, 2 to 30 percent slopes
54	Deshler-Agerdelly complex, extremely stony, 30 to 60 percent slopes
55	Deshler-Brownlee complex, 2 to 8 percent slopes
56	Deshler-Brownlee complex, 8 to 20 percent slopes
57	Deshler-Brownlee complex, 20 to 30 percent slopes
58	Deshler-Devnot complex, 2 to 30 percent slopes
59	Deshler-Devnot complex, 30 to 60 percent slopes
60	Deterson silt loam, 30 to 60 percent slopes
61	Deterson clay loam, 5 to 30 percent slopes
62	Dishner-Haw complex, 2 to 30 percent slopes
63	Donnel sandy loam, 0 to 4 percent slopes
64	Duneland
65	Elijah silt loam, 4 to 8 percent slopes
66	Elijah silt loam, 8 to 12 percent slopes
67	Falk fine sandy loam, 0 to 2 percent slopes
68	Gem stony clay loam, 2 to 30 percent slopes
69	Gem stony clay loam, 30 to 60 percent slopes
70	Gem extremely stony clay loam, 2 to 30 percent slopes
71	Gem-Bakeoven complex, 2 to 30 percent slopes
72	Gem-Bakeoven complex, 30 to 60 percent slopes
73	Gem-Reywat complex, 2 to 30 percent slopes
74	Gem-Reywat complex, 30 to 65 percent slopes
75	Gestrin loam, 2 to 4 percent slopes
76	Gestrin loam, 4 to 8 percent slopes
77	Glasgow clay loam, 2 to 4 percent slopes
78	Glasgow clay loam, 8 to 20 percent slopes
79	Glasgow clay loam, 20 to 60 percent slopes
80	Glasgow-Lankbush complex, 12 to 30 percent slopes
81	Glasgow-Lankbush complex, 30 to 60 percent slopes
82	Greenleaf silt loam, 0 to 2 percent slopes
83	Greenleaf silt loam, 2 to 4 percent slopes
84	Greenleaf silt loam, 4 to 8 percent slopes
85	Greenleaf silt loam, 8 to 12 percent slopes
86	Gross loam, 30 to 65 percent slopes
87	Gross silt loam, 30 to 65 percent slopes
88	Gross-Bakeoven complex, 30 to 65 percent slopes
89	Gross-Bakeoven complex, 30 to 65 percent slopes, stony
90	Gwin-rock outcrop complex, 40 to 65 percent slopes
91	Harpt loam, 2 to 4 percent slopes
92	Harpt loam, 4 to 8 percent slopes
93	Haw silt loam, 4 to 8 percent slopes
94	Haw silt loam, 8 to 12 percent slopes
95	Haw silt loam, 12 to 30 percent slopes
96	Haw silt loam, 30 to 60 percent slopes
97	Jacknife loam, 1 to 4 percent slopes
98	Jacknife loam, 4 to 8 percent slopes
99	Jacknife loam, 8 to 12 percent slopes
100	Jacknife loam, 12 to 30 percent slopes
101	Jacknife very stony loam, 4 to 30 percent slopes
102	Jenny clay, 0 to 2 percent slopes
103	Johnson coarse sandy loam, 30 to 65 percent slopes
104	Jughandle sandy loam, 30 to 60 percent slopes
105	Jughandle-Suttler association, 40 to 90 percent slopes
106	Kangas coarse sandy loam, 0 to 2 percent slopes
107	Klicker stony loam, 30 to 60 percent slopes
108	Klickson silt loam, 30 to 60 percent slopes
109	Klickson-Rock outcrop complex, 40 to 90 percent slopes
110	Langrell loam, 0 to 2 percent slopes
111	Langrell gravelly loam, 0 to 3 percent slopes
112	Lankbush sandy loam, 2 to 4 percent slopes
113	Lankbush sandy loam, 4 to 8 percent slopes
114	Lankbush sandy loam, 8 to 12 percent slopes
115	Lankbush sandy loam, 12 to 30 percent slopes
116	Lanktree loam, 0 to 2 percent slopes
117	Lanktree loam, 2 to 30 percent slopes
118	Lanktree clay loam, 4 to 8 percent slopes
119	Lanktree very cobbly loam, 2 to 30 percent slopes
120	Lanktree-Lanktree complex, 30 to 60 percent slopes
121	Ligget sandy loam, 5 to 30 percent slopes
122	Ligget sandy loam, 30 to 60 percent slopes
123	Lolalita sandy loam, 4 to 8 percent slopes
124	Lolalita sandy loam, 8 to 12 percent slopes
125	Lolalita sandy loam, 12 to 30 percent slopes
126	Lolalita-Glasgow complex, 30 to 60 percent slopes
127	Lolalita-Saralegui complex, 30 to 60 percent slopes
128	Lorella-Rock outcrop complex, 30 to 50 percent slopes
129	Lorella-Rock outcrop complex, 50 to 65 percent slopes
130	McDaniel stony loam, 10 to 60 percent slopes
131	McDaniel-Rockly complex, 10 to 70 percent slopes
132	McDaniel-Starveout complex, 10 to 60 percent slopes
133	Meland silt loam, 4 to 8 percent slopes
134	Meland silt loam, 8 to 12 percent slopes
135	Meland silt loam, 12 to 30 percent slopes
136	Meland very stony loam, 4 to 30 percent slopes
137	Meland-Riggins complex, 4 to 30 percent slopes
138	Meland-Riggins complex, 30 to 60 percent slopes
139	Melton loam, 0 to 2 percent slopes
140	Melton-Roseberry complex, 0 to 2 percent slopes
141	Midvale silty clay loam, 0 to 2 percent slopes
142	Midvale silt clay loam, 2 to 4 percent slopes
143	Midvale silty clay loam, 4 to 8 percent slopes
144	Midvale silty clay loam, 8 to 12 percent slopes
145	Midvale silty clay loam, 12 to 20 percent slopes
146	Midvale-Demoss complex, 2 to 4 percent slopes
147	Molly-Littlesalmon complex, 30 to 60 percent slopes
148	Molly-Littlesalmon-rock outcrop complex, 60 to 75 percent slopes
149	Moonstone coarse sandy loam, 30 to 60 percent slopes
150	Moulton fine sandy loam, 0 to 3 percent slopes
151	Moulton loam, 0 to 3 percent slopes
152	Moulton-Falk fine sandy loams, 0 to 3 percent slopes
153	Mulett-Mackey complex, 30 to 60 percent slopes
154	Nazaton-Naz complex, 40 to 90 percent slopes
155	Newell clay loam, 0 to 2 percent slopes
156	Newell clay loam, 2 to 4 percent slopes
157	Newell clay loam, 4 to 8 percent slopes
158	Newell stony clay loam, 2 to 12 percent slopes
159	Notus sandy loam, 0 to 3 percent slopes
160	Nyssaton silt loam, 0 to 2 percent slopes
161	Odermott-Appledellia complex, 12 to 30 percent slopes
162	Oldsferry shaly loam, 25 to 65 percent slopes
163	Onyx silt loam, 0 to 3 percent slopes
164	Owyhee silt loam, 0 to 2 percent slopes
165	Owyhee silt loam, 2 to 4 percent slopes
166	Owyhee silt loam, 4 to 8 percent slopes
167	Owyhee silt loam, 8 to 12 percent slopes
168	Owyhee silt loam, 12 to 20 percent slopes
169	Paniogue loam, 0 to 2 percent slopes
170	Payette coarse sandy loam, 12 to 30 percent slopes
171	Payette coarse sandy loam, 30 to 60 percent slopes
172	Payette-Van Dusen association, 30 to 60 percent slopes
173	Power-Purdam silt loams, 0 to 2 percent slopes
174	Power-Purdam silt loams, 2 to 4 percent slopes
175	Power-Purdam silt loams, 4 to 8 percent slopes
176	Riggins extremely stony loam, 4 to 30 percent slopes
177	Riggins extremely stony loam, 30 to 50 percent slopes
178	Riggins extremely stony loam, 50 to 75 percent slopes
179	Riverwash
180	Rock outcrop-Bakeoven complex, 60 to 80 percent slopes
181	Rockly very stony loam, 12 to 60 percent slopes
182	Rockly-Riggins complex, 4 to 30 percent slopes
183	Rockly-Riggins complex, 30 to 65 percent slopes
184	Rockly-Rock outcrop complex, 10 to 50 percent slopes
185	Rockly-Starveout-McDaniel association, 3 to 70 percent slopes
186	Roseberry loam, 0 to 2 percent slopes
187	Shellrock-Rock outcrop complex, 12 to 35 percent slopes
188	Shellrock-Rock outcrop complex, 35 to 60 percent slopes
189	Shoepeg loam, 0 to 3 percent slopes
190	Shoepeg silty clay loam, 0 to 3 percent slopes
191	Starveout-Gwin-McDaniel association, 3 to 45 percent slopes
192	Sudpeak loam, 3 to 20 percent slopes
193	Swede loam, 4 to 12 percent slopes
194	Tamred loam, 20 to 60 percent slopes
195	Ticanot very cobbly loam, 4 to 65 percent slopes
196	Tindahay-Cashmere complex, 2 to 4 percent slopes
197	Tindahay-Cashmere complex, 4 to 8 percent slopes
198	Tindahay-Cashmere complex, 8 to 12 percent slopes
199	Typic Xerofluvents, cobbly, 4 to 40 percent slopes
200	Van Dusen-Haw complex, 30 to 65 percent slopes
201	Wapshilla loam, 30 to 60 percent slopes
W	Water

CONVENTIONAL AND SPECIAL SYMBOLS LEGEND

CULTURAL FEATURES

BOUNDARIES

- National, state, or province
- County or parish
- Minor civil division
- Reservation (national forest or park, state forest or park, and large airport)
- Land grant
- Limit of soil survey (label)
- Field sheet matchline and neatline
- AD HOC BOUNDARY (label)
- Small airport, airfield, park, oilfield, cemetery, or flood pool
- STATE COORDINATE TICK 1 890 000 FEET
- LAND DIVISION CORNER (sections and land grants)

ROADS

- Divided (median shown if scale permits)
- Other roads
- Trail

ROAD EMBLEM & DESIGNATIONS

- Interstate (55)
- Federal (287)
- State (52)
- County, farm or ranch (398)

- RAILROAD
- POWER TRANSMISSION LINE (normally not shown)
- PIPE LINE (normally not shown)
- FENCE (normally not shown)

LEVEES

- Without
- With road
- With railroad

DAMS

- Large (to scale)
- Medium or Small (Named where applicable)

PITS

- Gravel pit
- Mine or quarry

MISCELLANEOUS CULTURAL FEATURES

- Farmstead, house (omit in urban area) (occupied)
- Church
- School
- Indian mound (label)
- Located object (label) (Tower)
- Tank (label) (Gas)
- Wells, oil or gas
- Windmill
- Kitchen midden

WATER FEATURES

DRAINAGE

- Perennial, double line
- Perennial, single line
- Intermittent
- Drainage end
- Canals or ditches
- Double-line (label) (CANAL)
- Drainage and/or irrigation

LAKES, PONDS AND RESERVOIRS

- Perennial
- Intermittent

MISCELLANEOUS WATER FEATURES

- Marsh or swamp
- Spring
- Well, artesian
- Well, irrigation
- Wet spot

SPECIAL SYMBOLS FOR SOIL SURVEY

- SOIL DELINEATIONS AND SYMBOLS (\ 100)
- ESCARPMENTS
  - Bedrock (points down slope)
  - Other than bedrock (points down slope)
- SHORT STEEP SLOPE
- GULLY
- DEPRESSION OR SINK
- SOIL SAMPLE (normally not shown)
- MISCELLANEOUS
  - Blowout
  - Clay spot
  - Gravelly spot
  - Gumbo, slick or scabby spot (sodic)
  - Dumps and other similar non soil areas
  - Prominent hill or peak
  - Rock outcrop (includes sandstone and shale)
  - Saline spot
  - Sandy spot
  - Severely eroded spot
  - Slide or slip (tips point upslope)
  - Stony spot, very stony spot (0 00)

SOIL SURVEY OF ADAMS-WASHINGTON AREA, IDAHO, PARTS OF ADAMS AND WASHINGTON COUNTIES — SHEET NUMBER 1

1

N

116° 22'30"
45°15'00"

(Joins inset A, sheet 2)

R. 1 E. | R. 2 E.

370 000 FEET

1 305 000 FEET

T. 22 N.

1 295 000 FEET

340 000 FEET

45°12'30"
116°15'00"

(Joins sheet 2)

PAYETTE NATIONAL FOREST

PAYETTE NATIONAL FOREST BOUNDARY

Little Salmon River

IDAHO COUNTY (ADAMS)

SALMON COUNTY

Fall Creek

Camp Creek

95

95

199

199

16

21

22

23

27

28

33

34

177

154

108

109

201

23

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

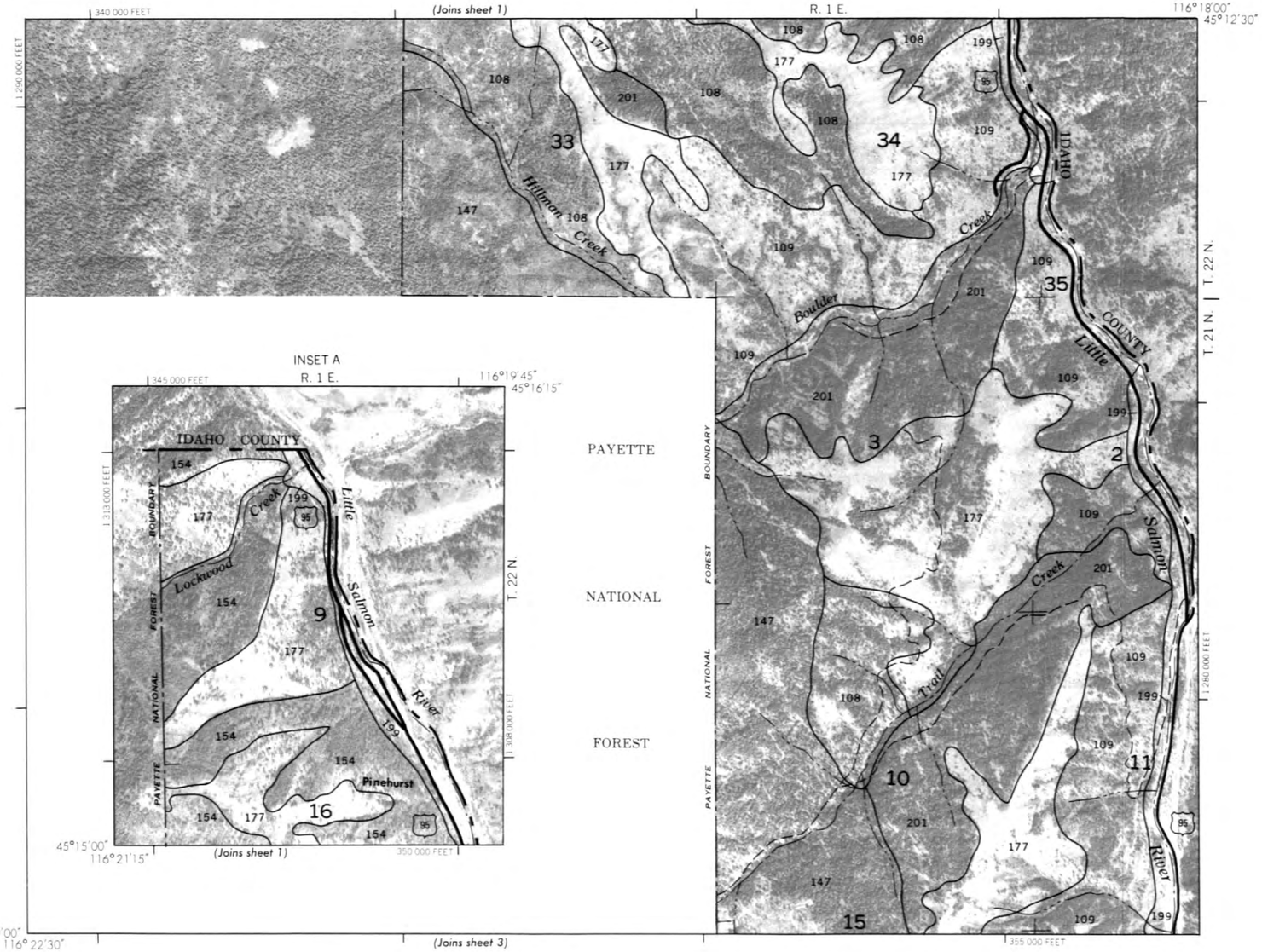
SCALE 1:24 000

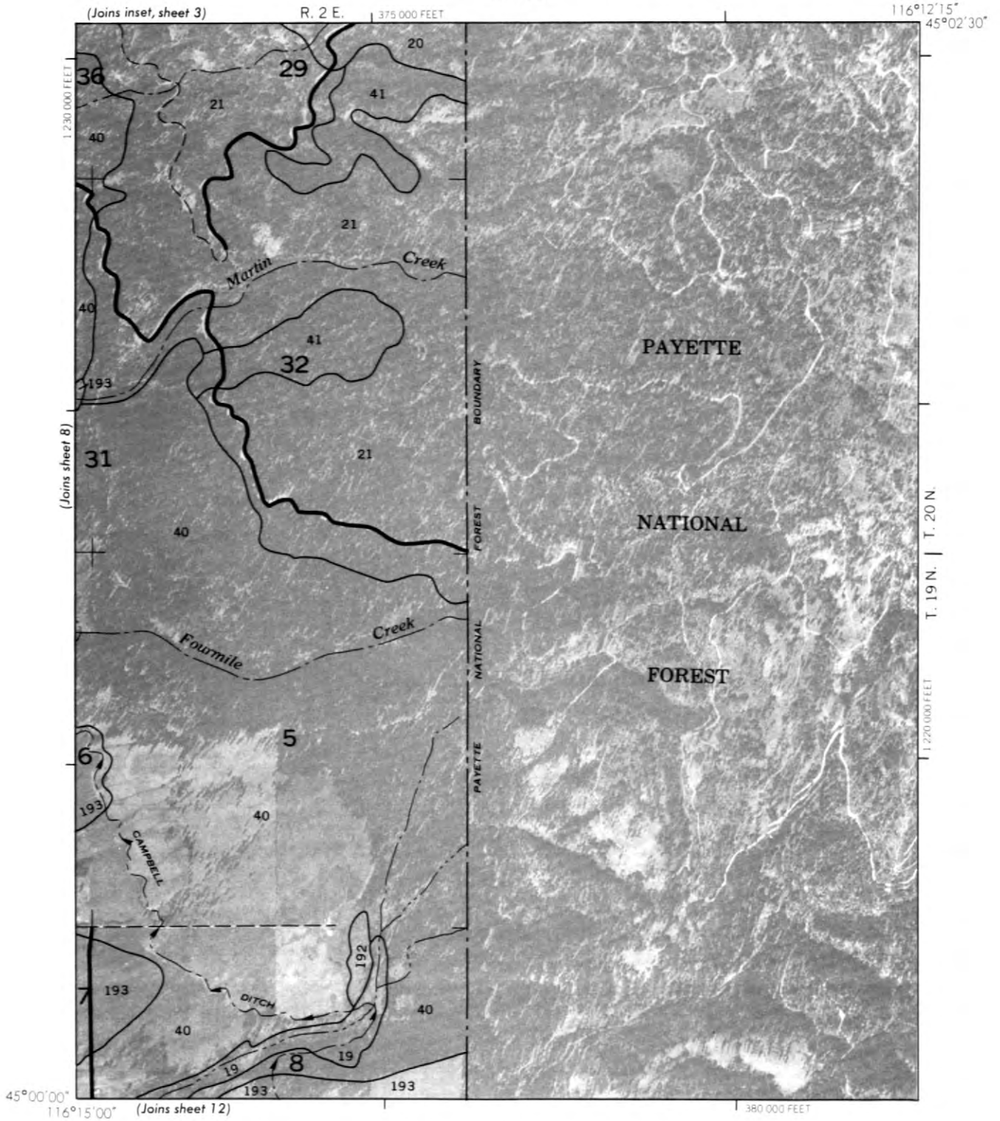
2

N

INSET A

INSET B





1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

116°22'30"
45°10'00"
R. 1 E.
(Joins sheet 2)
1 360 000 FEET
1 275 000 FEET
T. 21 N.
1 265 000 FEET
340 000 FEET
45°7'30"
116°16'45"
(Joins sheet 4)

PAYETTE NATIONAL FOREST

BOUNDARY

INDIAN MOUNTAIN

ROUND VALLEY

Little Salmon River

ADAMS COUNTY

IDAHO COUNTY

95

199

201 177 109 147 148 121 120 193 188

15 14 22 23 27 26 25 19

116°15'00"
45°5'00"
R. 2 E.
377 000 FEET
1 245 000 FEET
T. 20 N.
(Joins sheet 5)
1 235 000 FEET
372 000 FEET
45°02'30"
116°13'30"
(Joins inset B, sheet 2)

PAYETTE NATIONAL FOREST

PAYETTE NATIONAL FOREST BOUNDARY

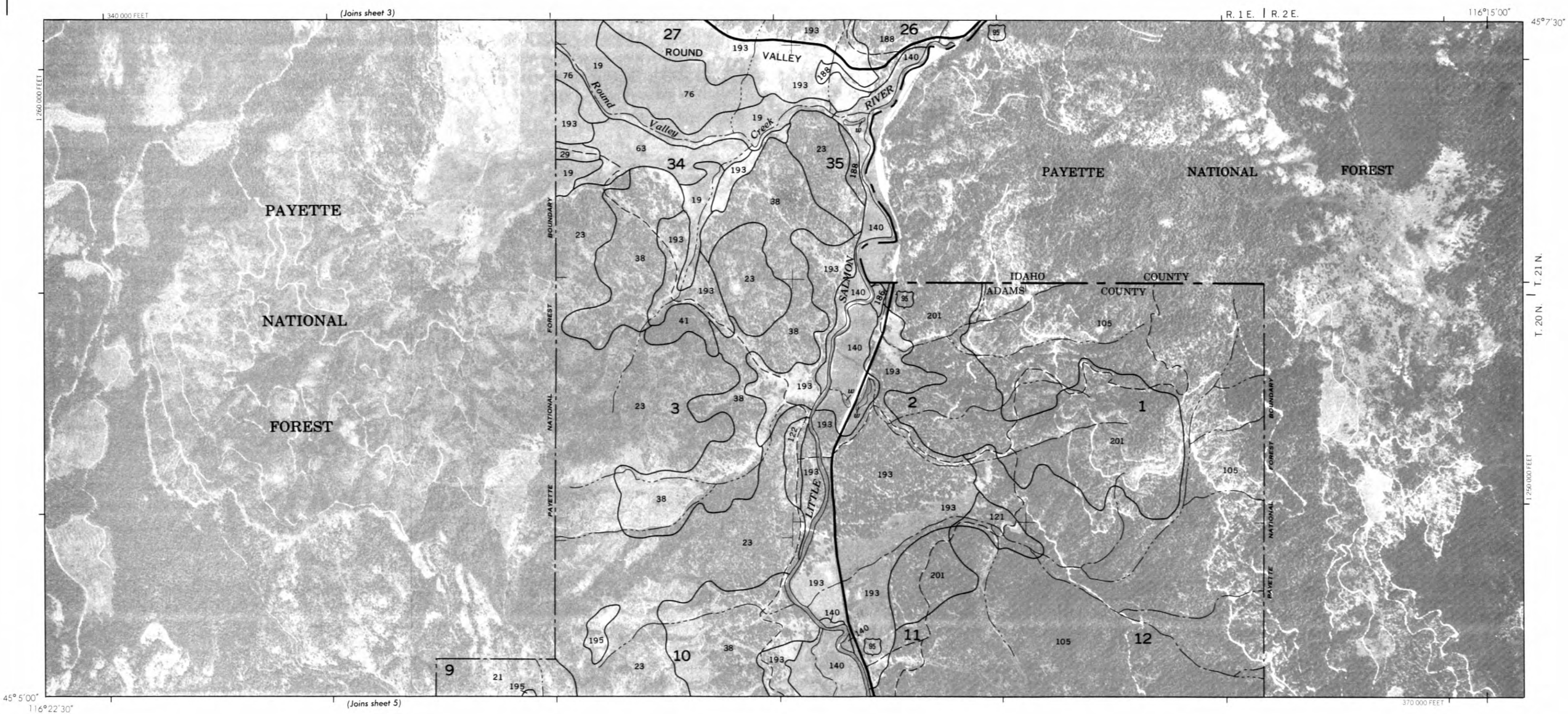
Sixmile Creek

122 188 104 187 23 20 21 29

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000


4
N
340 000 FEET
(Joins sheet 3)
R. 1 E.
R. 2 E.
116°15'00"
45°7'30"
1 260 000 FEET
T. 20 N.
T. 21 N.
PAYETTE
NATIONAL
FOREST
BOUNDARY
ROUND
VALLEY
Round Valley Creek
SALMON RIVER
LITTLE
IDAHO
COUNTY
ADAMS
COUNTY
PAYETTE NATIONAL FOREST BOUNDARY
1 290 000 FEET
45°5'00"
116°22'30"
(Joins sheet 5)
370 000 FEET
1 3/4 1/2 1/4 0 1 2 MILES
1 0.5 0 1 2 KILOMETERS
SCALE 1:24 000

N

116° 22'30"
45°5'00"

(Joins sheet 4)

R. 1 E. | R. 2 E.

370 000 FEET

T. 20 N.

1 235 000 FEET

PAYETTE NATIONAL FOREST BOUNDARY

PAYETTE NATIONAL FOREST

(Joins inset, sheet 3)

1 245 000 FEET

9 10 11 12

16 15 14 13

17

20 21 22 23 24

29 28 27 26 25 30

Creek Mud Middle Little Salmon Meadows Valley River Stamile Creek CAMPBELL DITCH

340 000 FEET

(Joins sheet 8)

45°02'30"
116°15'00"

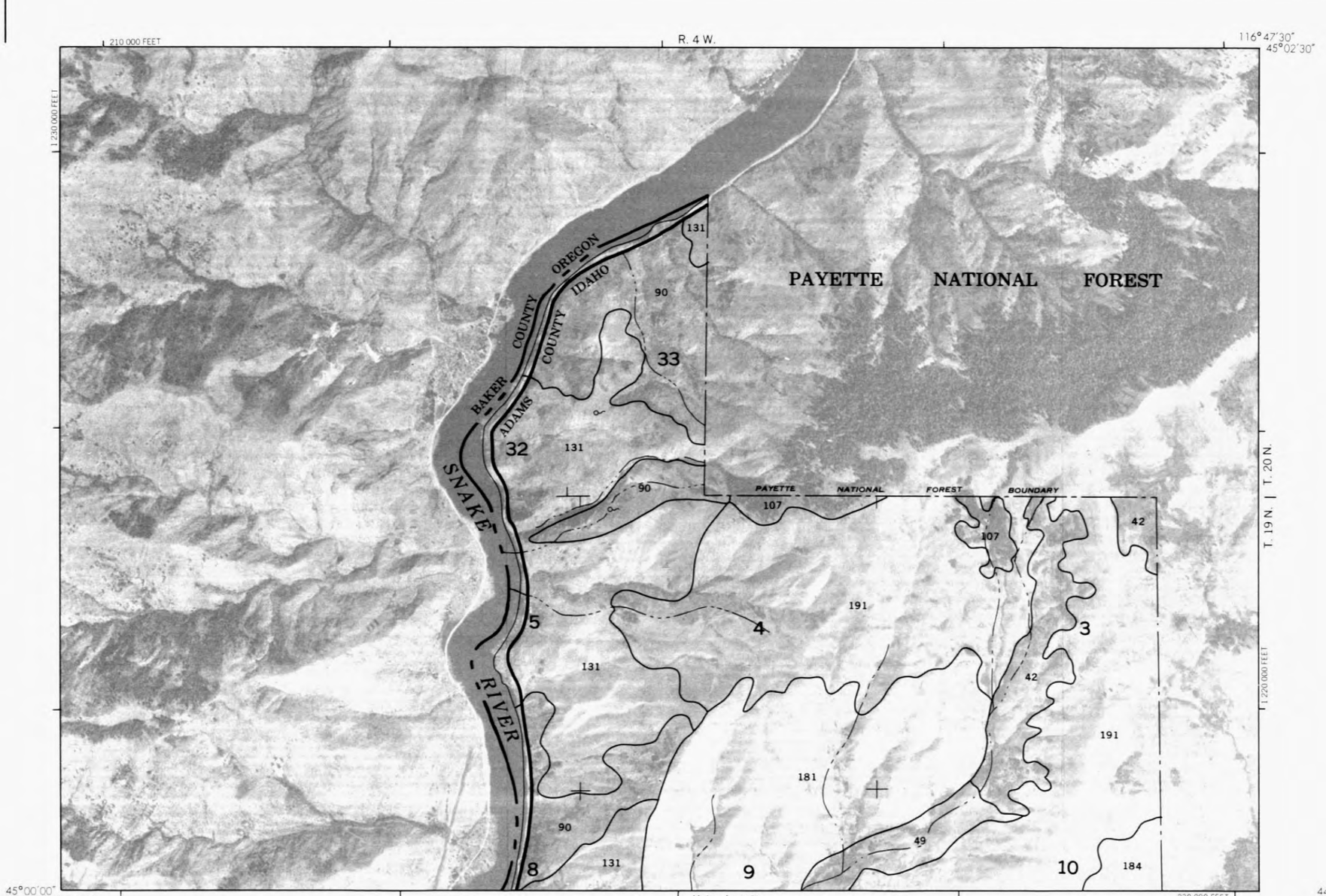
1 3/4 1/2 1/4 0 1 2 MILES

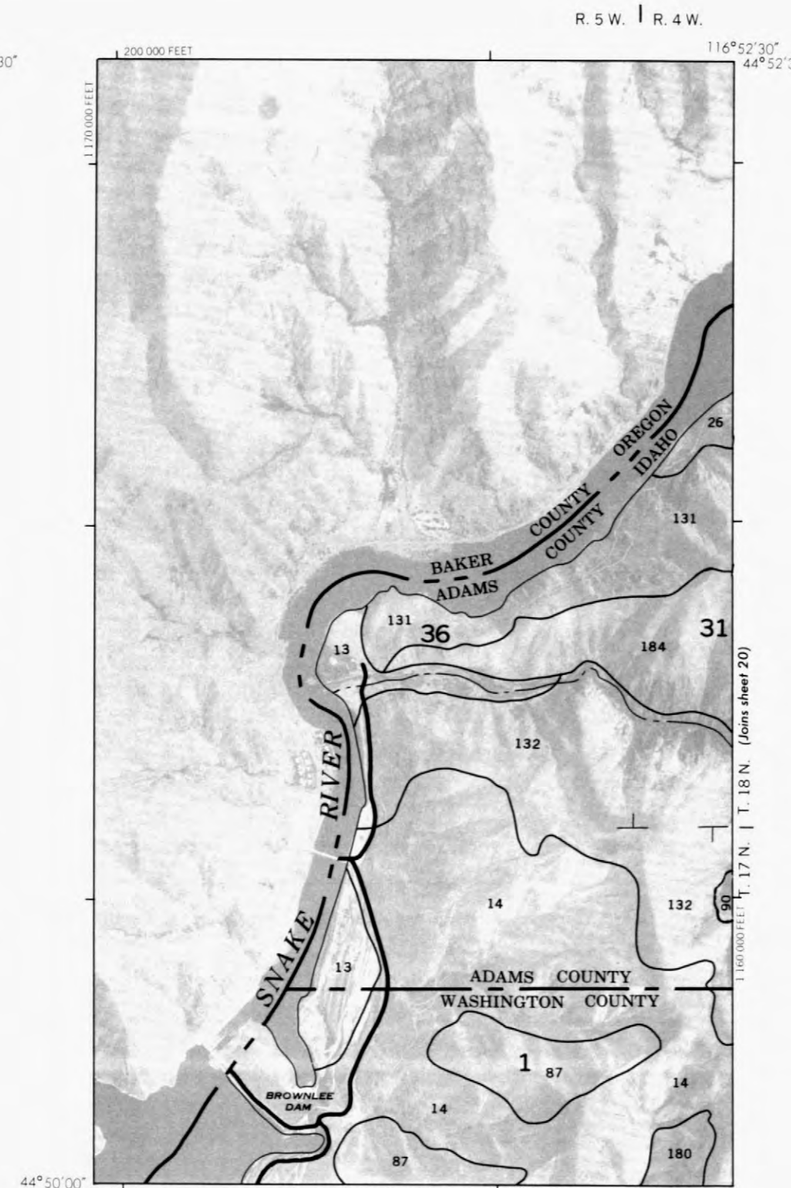
1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

6

N





1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

116°27'30"
45°02'30"

R. 1 W. | R. 1 E.

335 000 FEET

T. 19 N. | T. 20 N.

1 200 000 FEET

1 130 000 FEET

PAYETTE NATIONAL FOREST

PAYETTE NATIONAL FOREST BOUNDARY

Weiser River

Price Valley

3 2 1 6 10 11 12 7

320 000 FEET

(Joins sheet 8)

(Joins sheet 10)

45°00'00"
116°22'30"

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

340 000 FEET

(Joins sheet 5)

R. 1 E. | R. 2 E.

116°15'00"
45°02'30"

1 230 000 FEET

PAYETTE NATIONAL FOREST BOUNDARY

PAYETTE NATIONAL FOREST

Mud Creek

Middle Mud Creek

Little Mud Creek

Hot Springs

Little Meadows Creek

Martin Creek

Stimile Creek

Salmon River

Fourmile Creek

Threemile Creek

CAMPBELL DITCH

ALLEY

T. 19 N. | T. 20 N.

1 220 000 FEET

(Joins inset B, sheet 2)

(Joins sheet 7)

45°00'00"
116° 22'30"

(Joins sheet 11)

370 000 FEET

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

R. 4 W. | R. 3 W.

116°52'30"
45°00'00"

(Joins sheet 6)

240 000 FEET

1 215 000 FEET

T. 19 N.

1 205 000 FEET

PAYETTE NATIONAL FOREST

PAYETTE NATIONAL FOREST BOUNDARY

8 9 10 16 15 17 20 21 22 23 24 25 26 27 28 29

Creek 49 191 184 Blue Creek Indian Creek 130 181 184 132 Gore Gulch 132 130 107 131 90 131 90 20 COUNTY OREGON COUNTY IDAHO BAKER ADAMS OXBOW DAM 107 132 131 107 132 185 137 Scorpion Creek 107 Salt Creek 42 182 107 137 182 182 137 111 137 Barber Flat 185 90 42 182 182 137 131 132 185 90 131 90 137 132 130

Oxbow Reservoir SNAKE RIVER

210 000 FEET

130

(Joins sheet 13)

44°57'30"
116°45'00"

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

310 000 FEET

(Joins sheet 7)

R. 1 W. | R. 1 E.

116°22'30"
45°00'00"

1 215 000 FEET

T. 19 N.

(Joins sheet 11)

1 205 000 FEET

PAYETTE NATIONAL FOREST

Mosquito

Lost Valley Reservoir

PAYETTE NATIONAL FOREST BOUNDARY

Weiser

19 Creek

Price

Rider Valley

PACIFIC RAILROAD

UNION

10 11 12 7 16 15 14 13 18 24 19 30 26 25

44°57'30"
116°30'00"

(Joins sheet 14)

335 000 FEET

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

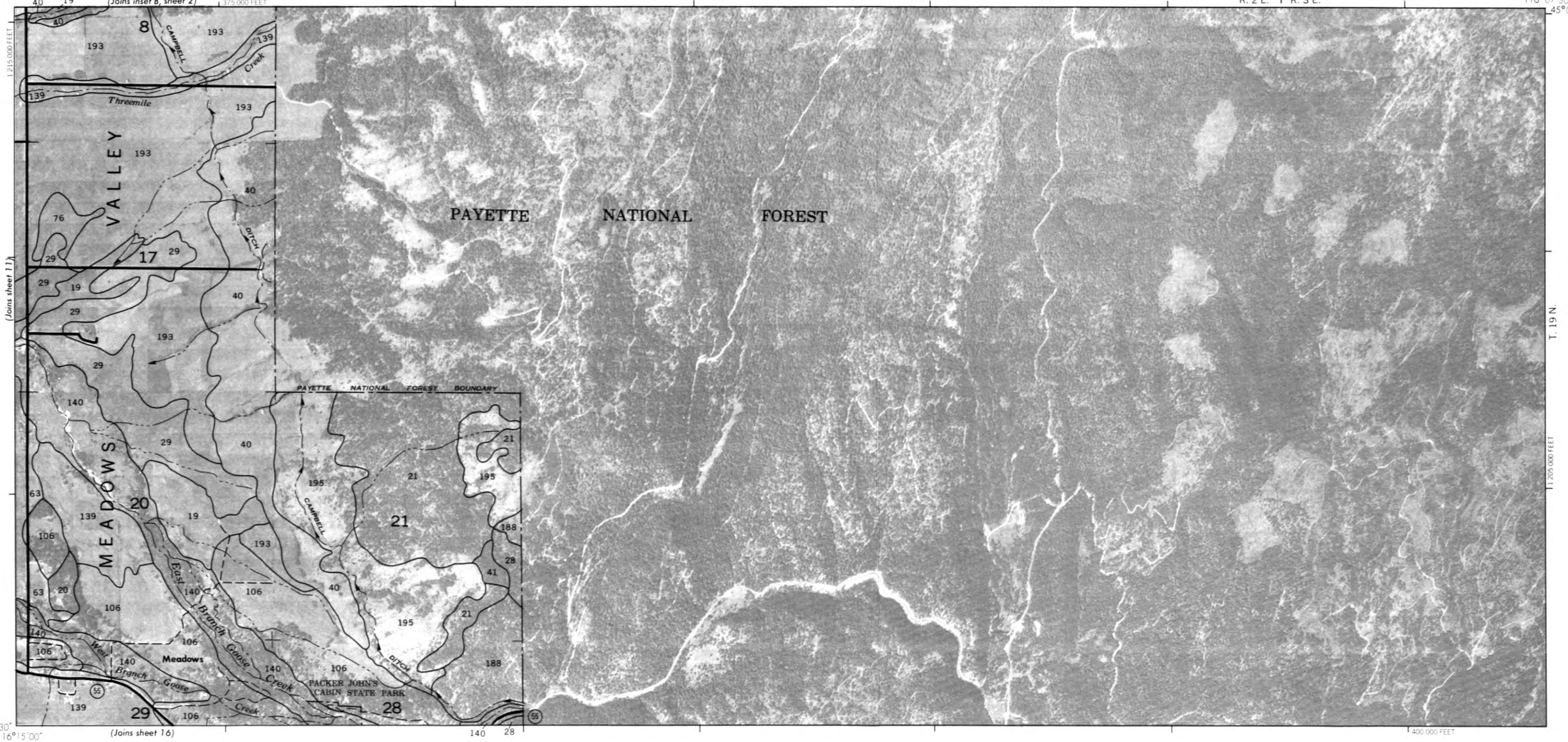
N

116°22'30"
45°00'00"
R. 1 E. | R. 2 E.
(Joins sheet 8)
370 000 FEET
T. 19 N.
1 205 000 FEET
(Joins sheet 10)
(Joins sheet 12)
340 000 FEET
(Joins sheet 15)
44°57'30"
116°15'00"

Little Mud Creek
RAILROAD
PACIFIC
UNION
Mud Creek
RAILROAD GRADE
Creek
RIVER
Threemile
Creek
East
Branch
Goose
Creek
MEADOWS
West
Branch
Goose
Creek
SALMON
RIVER
Landing Strip
VALLEY
New Meadows
LITTLE
Little
Creek

1 3/4 1/2 1/4 0 1 2 MILES
1 0.5 0 1 2 KILOMETERS
SCALE 1:24 000

N



1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

13

N

R. 4 W. | R. 3 W.

116°52'30"
44°57'30"

(Joins sheet 9)

240 000 FEET

1 200 000 FEET

T. 18 N. | T. 19 N.

1 190 000 FEET

210 000 FEET

44°55'00"
116°45'00"

(Joins sheet 17)

29 28 27 26 25 33 34 35 36 4 3 9 10

SNAKE RIVER

ADAMS COUNTY
BAKER COUNTY
IDAHO
OREGON

Warm Springs Creek

Salt Creek

Butte Creek

Barber Flat

Oxbow Reservoir

Limestone Gulch

Summer Creek

PAYETTE NATIONAL FOREST BOUNDARY

PAYETTE NATIONAL FOREST

SCALE 1:24 000

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

N

310 000 FEET

(Joins sheet 10)

R. 1 W. | R. 1 E.

116°22'30"
44°57'30"

1 200 000 FEET

PAYETTE NATIONAL FOREST

PAYETTE NATIONAL FOREST BOUNDARY

Tamarack

Weiser River

Beaver Creek

Woodland

Woodlawn Cr.

26 25 30 35 36 31 6

T. 18 N. | T. 19 N.

1 190 000 FEET

(Joins sheet 15)

335 000 FEET

44°55'00"
116°30'00"

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

116° 22'30"
44°57'30"

R. 1 E. | R. 2 E.

(Joins sheet 11)

370 000 FEET

1 200 000 FEET

T. 18 N. | T. 19 N.

(Joins sheet 14)

1 190 000 FEET

(Joins sheet 16)

BLUE BUNCH RIDGE

MEADOWS VALLEY

Mud Creek

Salmon River

Little Big Creek

Little Creek

Butler Creek

Mill Creek

Vick Creek

PAYETTE NATIONAL FOREST BOUNDARY

PAYETTE NATIONAL FOREST

340 000 FEET

(Joins sheet 18)

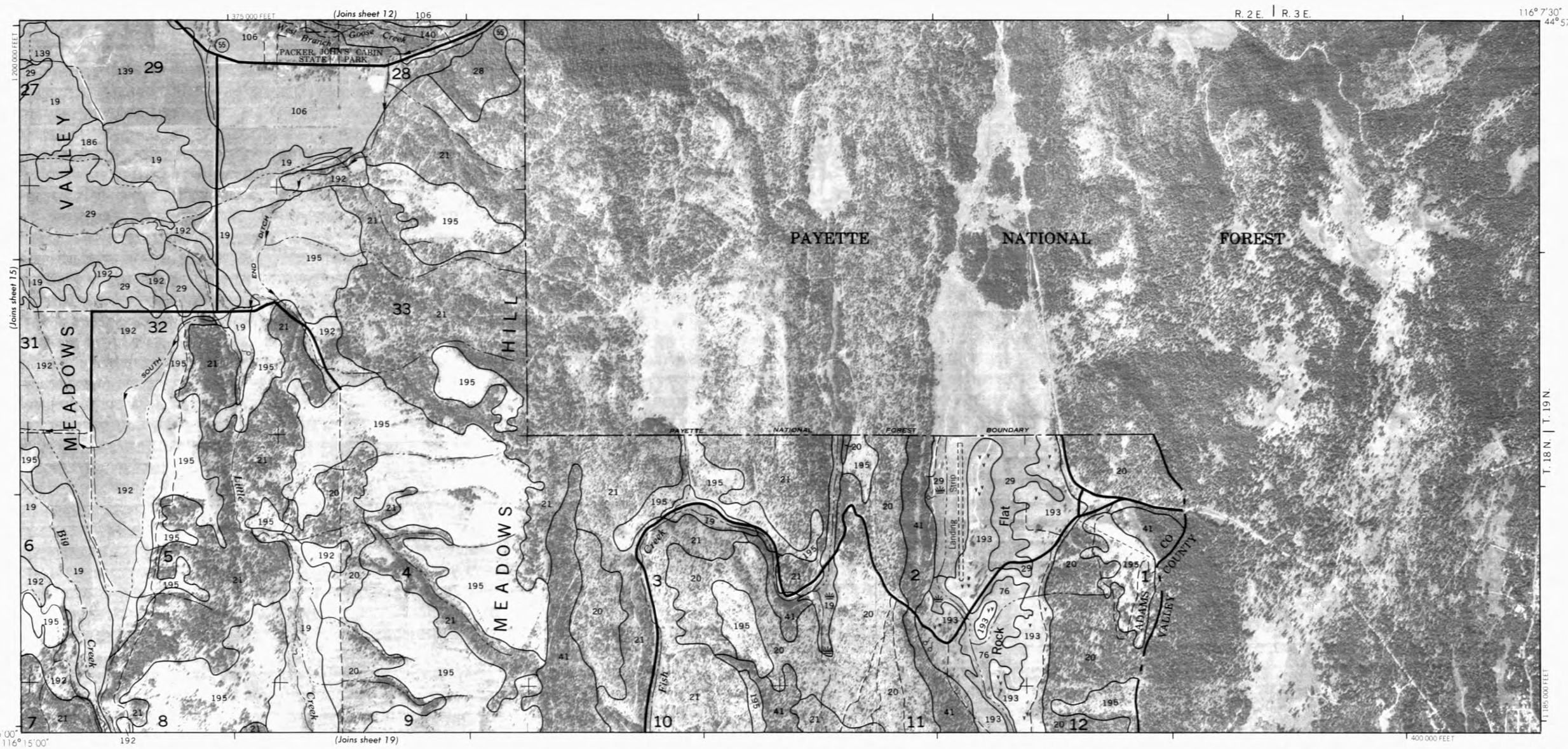
44°55'00"
116°15'00"

SCALE 1:24 000

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

N


1 375 000 FEET
(Joins sheet 12)
106
R. 2 E.
R. 3 E.
116° 7'30"
44° 57'30"
1 200 000 FEET
West Branch
Goose Creek
140
PACKER JOHN'S CABIN STATE PARK
55
139
29
28
27
19
106
VALLEY
186
21
192
195
ditch
END
33
MEADOWS
HILL
31
32
SOUTH
Little
Big
Creek
6
5
4
3
2
1
7
8
9
10
11
12
PAYETTE NATIONAL FOREST BOUNDARY
Strip
Landing
Flat
Rock
ADAMS CO
COUNTY
193
76
41
20
(Joins sheet 15)
44°55'00"
116°15'00"
(Joins sheet 19)
400 000 FEET
T. 18 N.
T. 19 N.
1 185 000 FEET
1 3/4 1/2 1/4 0 1 2 MILES
1 0.5 0 1 2 KILOMETERS
SCALE 1:24 000

N

116° 52'30"
44° 55'00"

R. 4 W. | R. 3 W.

240 000 FEET

(Joins sheet 13)

185 000 FEET

T. 18 N.

175 000 FEET

210 000 FEET

44°52'30"
116°45'00"

(Joins sheet 20)

PAYETTE NATIONAL FOREST

PAYETTE NATIONAL FOREST BOUNDARY

OREGON
IDAHO
COUNTY
COUNTY
BAKER
ADAMS

SNAKE RIVER

OXBOW RESERVOIR

Summer Creek

Williamson Creek

Cougar Creek

Jacobs Creek

Ladder Creek

Sheep Peak

Blue Jay Gulch

Emery Creek

Wildhorse River

Bisbee Creek

9 10 13 14 15 16 17 20 21 22 23 24 26

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

340 000 FEET

(Joins sheet 15)

R. 1 E. | R. 2 E.

116°15'00"

44°55'00"

1 180 000 FEET

BLUE

BUNCH

RIDGE

Creek

Vick

Little

Salmon

River

Beaver Cr.

PAYETTE NATIONAL FOREST BOUNDARY

PAYETTE NATIONAL FOREST

(Joins sheet 19) T. 18 N.

1 170 000 FEET

44°52'30"

116°22'30"

(Joins sheet 30)

370 000 FEET

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

116° 15'00"
44° 55'00"

R. 2 E. | R. 3 E.

400 000 FEET

1 180 000 FEET

T. 18 N.

1 170 000 FEET

375 000 FEET

(Joins sheet 16)

(Joins sheet 18)

(Joins sheet 24)

44° 52'30"
116° 7'30"

Little Creek

Fish Creek

Fish Lake

Big Creek

Rock Flat

ADAMS COUNTY

WASHINGTON COUNTY

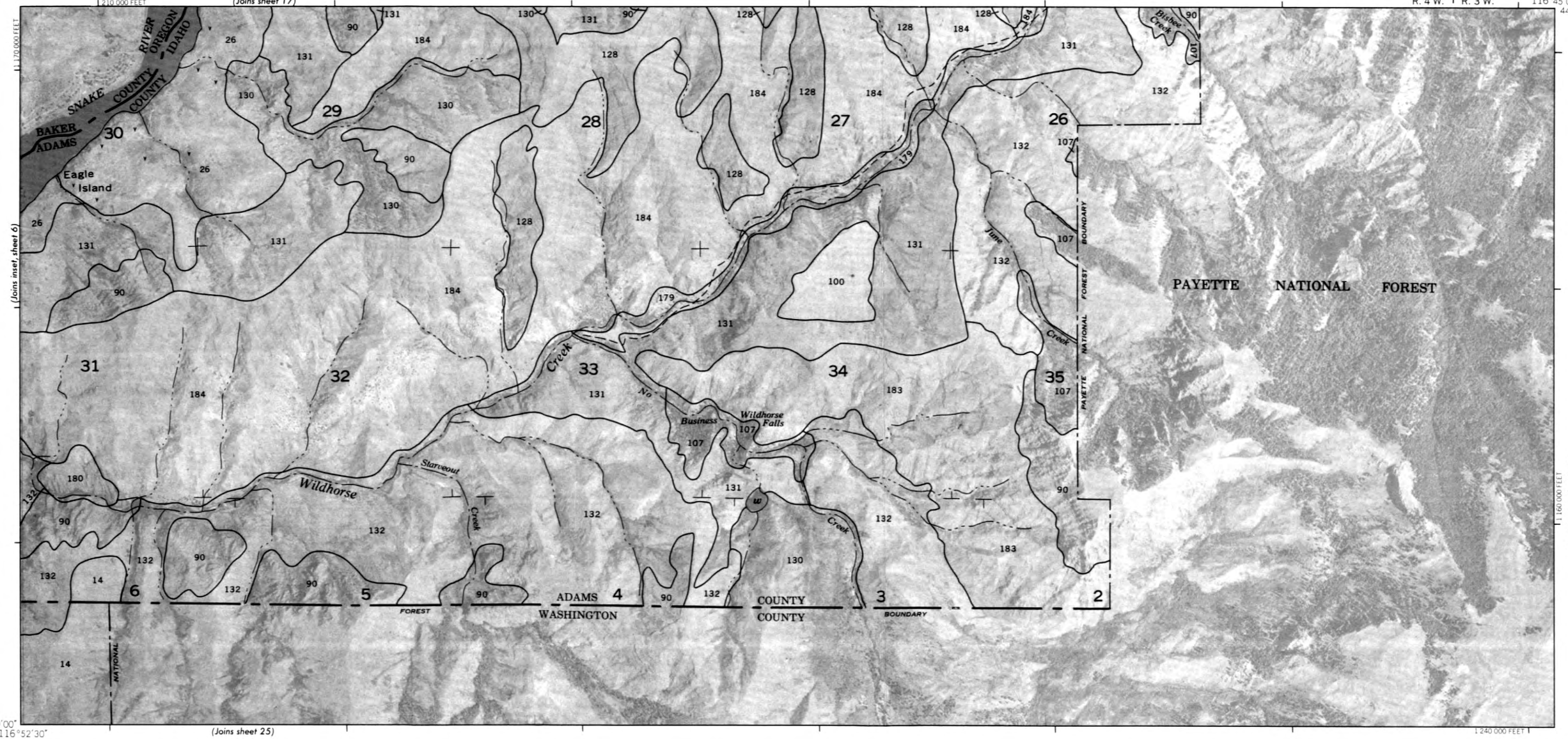
ADAMS VALLEY

RED RIDGE

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

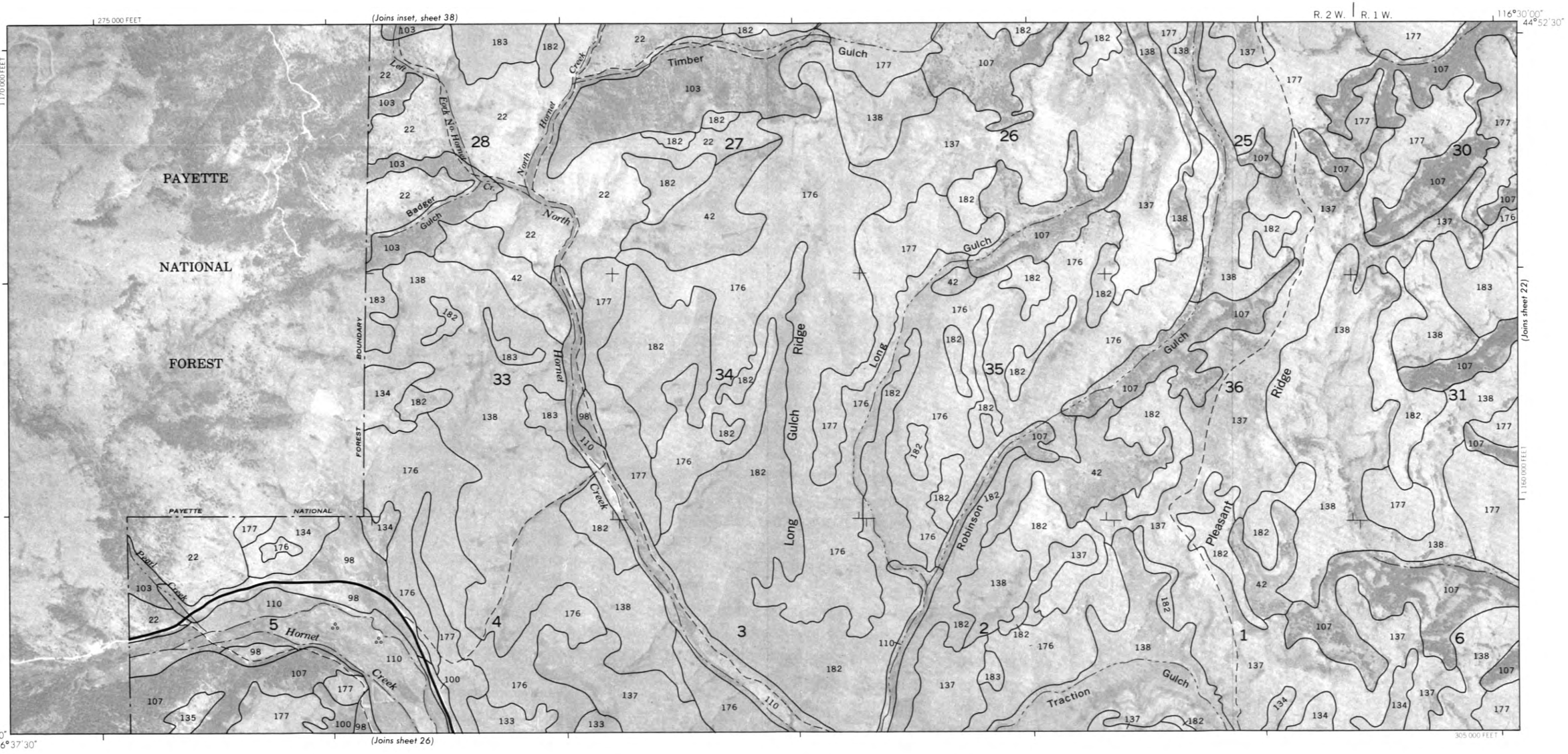


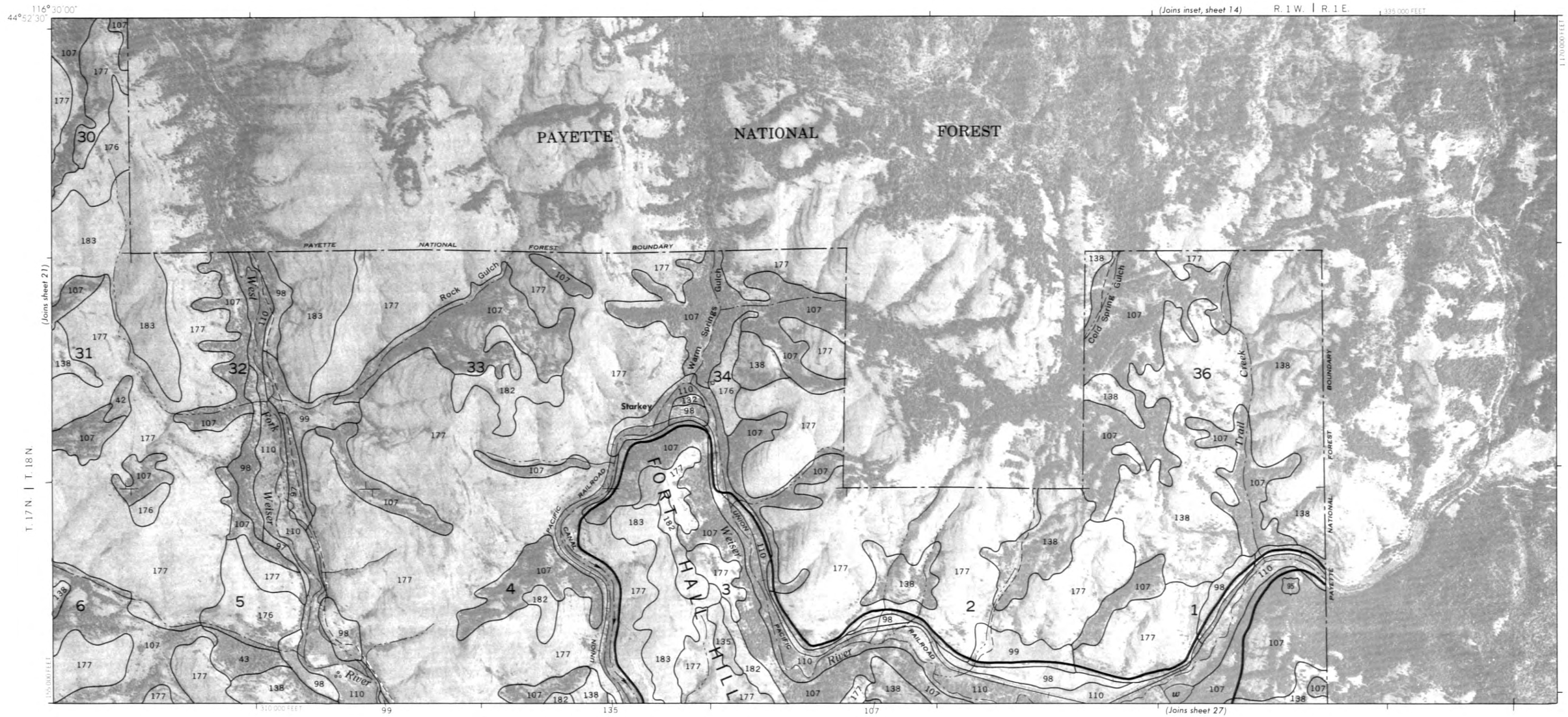
1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N


275 000 FEET
(Joins inset, sheet 38)
R. 2 W.
R. 1 W.
116°30'00"
44°52'30"
1 170 000 FEET
PAYETTE
NATIONAL
FOREST
BOUNDARY
Left Fork No Hornet Cr.
North Hornet Creek
Timber Gulch
Badger Gulch
North Hornet Creek
Long Ridge
Long Gulch
Robinson Gulch
Pleasant Ridge
Traction Gulch
Pearl Creek
Hornet Creek
Hornet Creek
28
27
26
25
30
33
34
35
36
31
4
3
2
1
6
5
T. 17 N.
T. 18 N.
(Joins sheet 22)
1 160 000 FEET
(Joins sheet 26)
44°50'00"
116°37'30"
305 000 FEET
1 3/4 1/2 1/4 0 1 2 MILES
1 0.5 0 1 2 KILOMETERS
SCALE 1:24 000


N
116°30'00"
44°52'30"
(Joins inset, sheet 14)
R. 1 W. | R. 1 E.
335 000 FEET
PAYETTE NATIONAL FOREST
PAYETTE NATIONAL FOREST BOUNDARY
(Joins sheet 21)
T. 17 N. | T. 18 N.
West Rock Gulch
Warm Springs Gulch
Cold Spring Gulch
Starkey
Fork
Weiser River
Trail Creek
PACIFIC UNION RAILROAD
PACIFIC UNION CANAL
FORT HALL
30
31
32
33
34
36
6
5
4
3
2
1
310 000 FEET
99
135
107
(Joins sheet 27)
1 3/4 1/2 1/4 0 1 2 MILES
1 0.5 0 1 2 KILOMETERS
SCALE 1:24 000

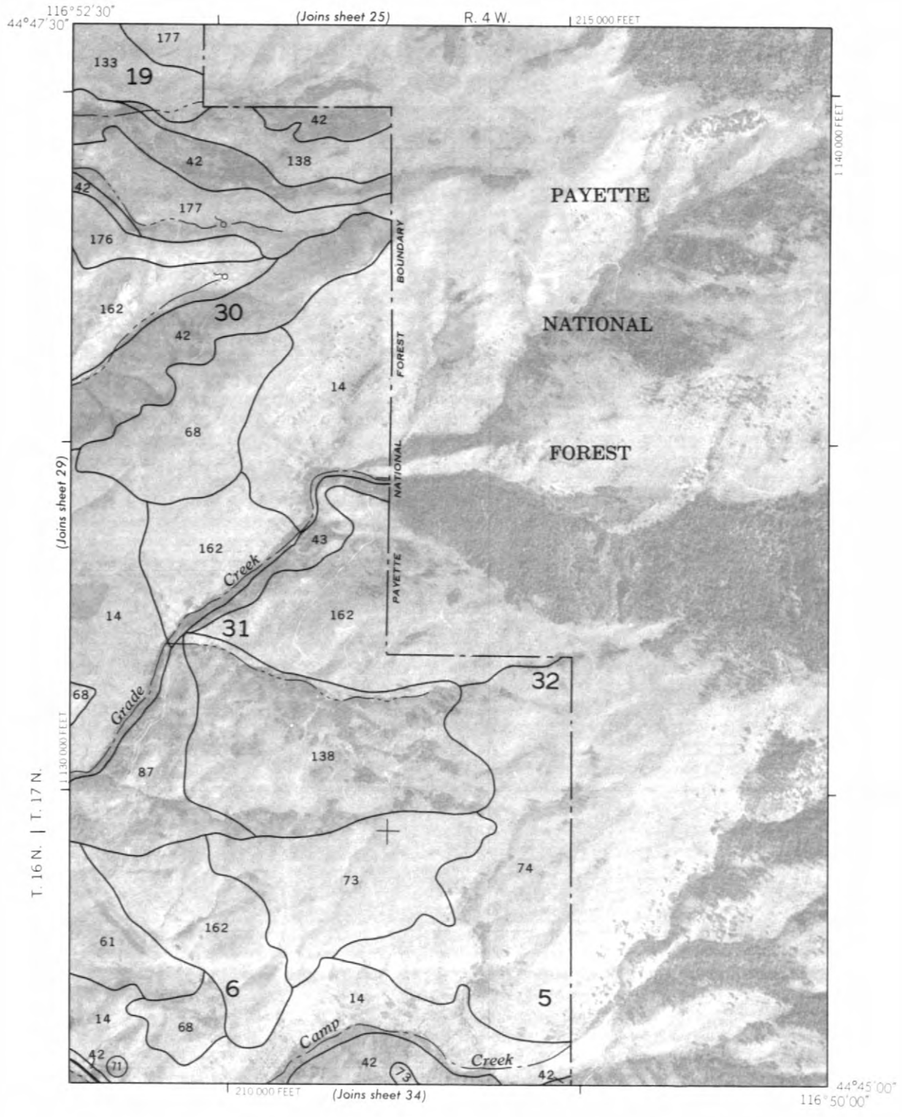
N

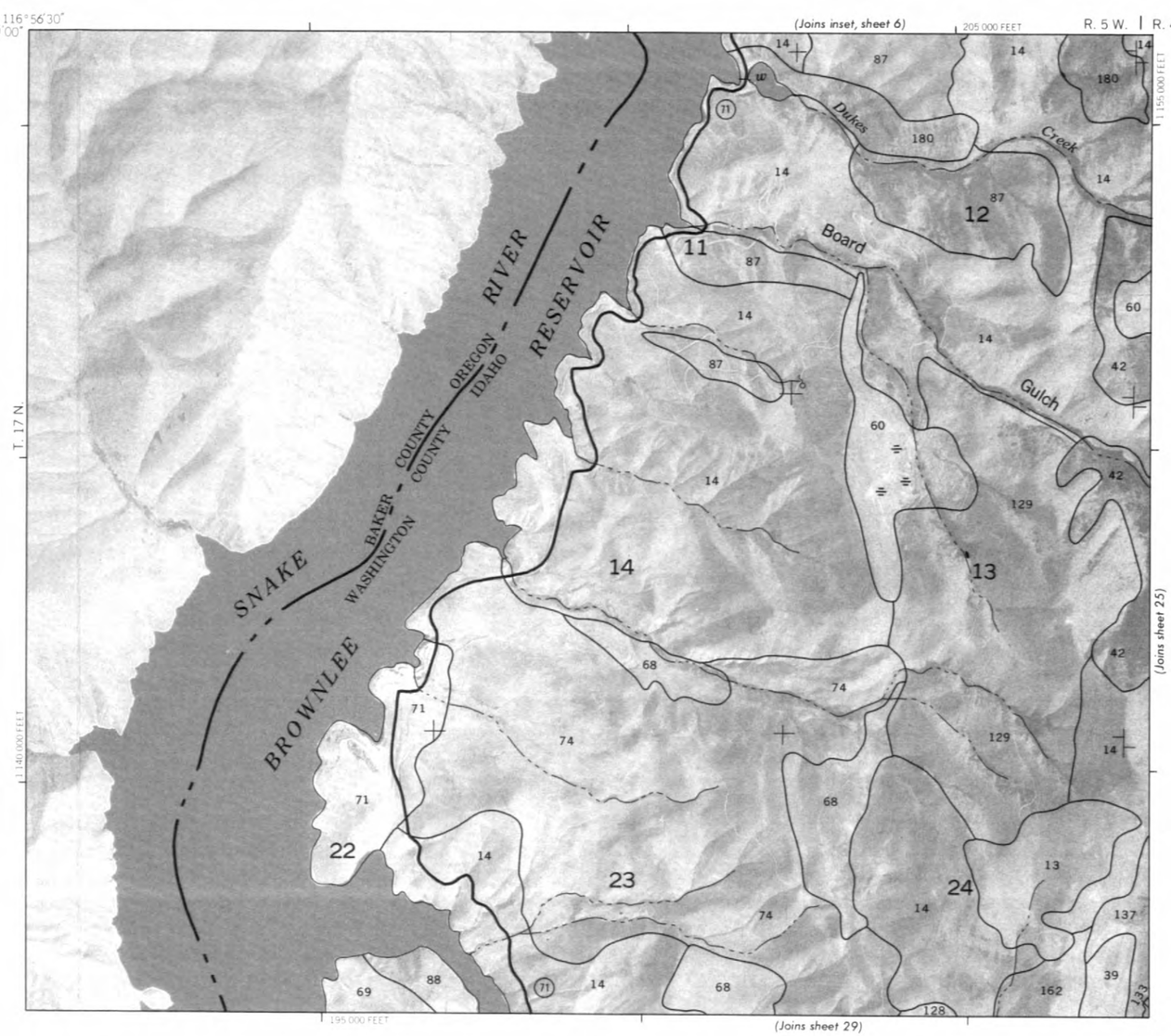
1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N





1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

R. 4 W. | R. 3 W.

116°45'00"

44°50'00"

210 000 FEET

(Joins sheet 20)

1 155 000 FEET

T. 17 N.

(Joins sheet 24)

14
180
Dukes
14
7
42
180
60
42
Creek
BOUNDARY
60
FOREST
14
Board
18
42
NATIONAL
14
42
Gulch
14
42
PAYETTE
137
19
177
133

PAYETTE NATIONAL FOREST

1 145 000 FEET

44°42'30"

116°52'30"

(Joins inset, sheet 24)

240 000 FEET

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

116° 37'30"
44°50'00"

(Joins sheet 21)

100

110

110

R. 2 W. | R. 1 W.

305 000 FEET

1 155 000 FEET

T. 17 N.

(Joins sheet 27)

PAYETTE NATIONAL FOREST BOUNDARY

PAYETTE

NATIONAL

FOREST

Fir Creek

Hornet Creek

Traction Gulch

Pleasant Ridge

North Hornet Creek

Hornet Creek

Lakey Creek

Hansen Creek

1 140 000 FEET

275 000 FEET

(Joins sheet 30)

44°47'30"
116°30'00"

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

310 000 FEET

183

107

(Joins sheet 22)

R. 1 W.

R. 1 E.

116°22'30"

44°50'00"

T. 17 N.

11 150 000 FEET

(Joins sheet 26)

FORT

HALL

HILL

WEISER

RIVER

Weiser River

Fork

Fruitvale

RAILROAD

UNION PACIFIC

CANAL

PAYETTE

NATIONAL

FOREST

BOUNDARY

PAYETTE NATIONAL FOREST

44°47'30"

116°30'00"

(Joins sheet 31)

335 000 FEET

11 140 000 FEET

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

370 000 FEET (Joins sheet 23) 195 R. 2 E. 116°11'45" 44°50'00"

355 000 FEET (Joins sheet 18) R. 1 E. | R. 2 E. 116°15'00" 44°52'30"

PAYETTE NATIONAL FOREST

BLUE BUNCH RIDGE BOUNDARY PAYETTE NATIONAL FOREST

Big Creek

The Dike

Buck Saddle

Shellworth Spring

RED RIDGE

Little Salmon River

ADAMS COUNTY

WASHINGTON COUNTY

ADAMS VALLEY

9 10 15 16 22 25 30 36

T. 17 N. | T. 18 N.

1 150 000 FEET

1 140 000 FEET

1 165 000 FEET

1 155 000 FEET

(Joins sheet 23)

380 000 FEET

370 000 FEET

44° 47' 15"

116° 15'00"

44°50'00"

116°18'45"

1 3/4 1/2 1/4 0 1 2 MILES

1 0 5 0 1 2 KILOMETERS

SCALE 1:24 000

N

R. 6 W. | R. 5 W.

180 000 FEET

R. 5 W. | R. 4 W.

116°52'30"

44°47'30"

1 140 000 FEET

(Joins sheet 24)

(Joins inset, sheet 32)

T. 16 N. | T. 17 N.

(Joins inset, sheet 24)

1 130 000 FEET

44°45'00"

117°00'00"

(Joins sheet 33)

205 000 FEET

SNAKE RIVER

BAKER COUNTY OREGON

WASHINGTON COUNTY IDAHO

BROWNLEE RESERVOIR

Brownlee Reservoir

Brownlee

Grade

Spring Creek

Cow Creek

Cave Creek

West Brownlee Creek

Heath

1 MILE = 1.61 KILOMETERS

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

116°41'45"
44°47'30"

(Joins sheet 26)

R. 2 W. | R. 1 W.

305,000 FEET

1,395,000 FEET

PAYETTE NATIONAL FOREST BOUNDARY

PAYETTE NATIONAL FOREST

Hanson Creek

Hornet Creek

21 22 23 24 19 25 30 36 31 1 6 32

T. 16 N. | T. 17 N.

(Joins sheet 31)

1,425,000 FEET

275,000 FEET

(Joins sheet 35)

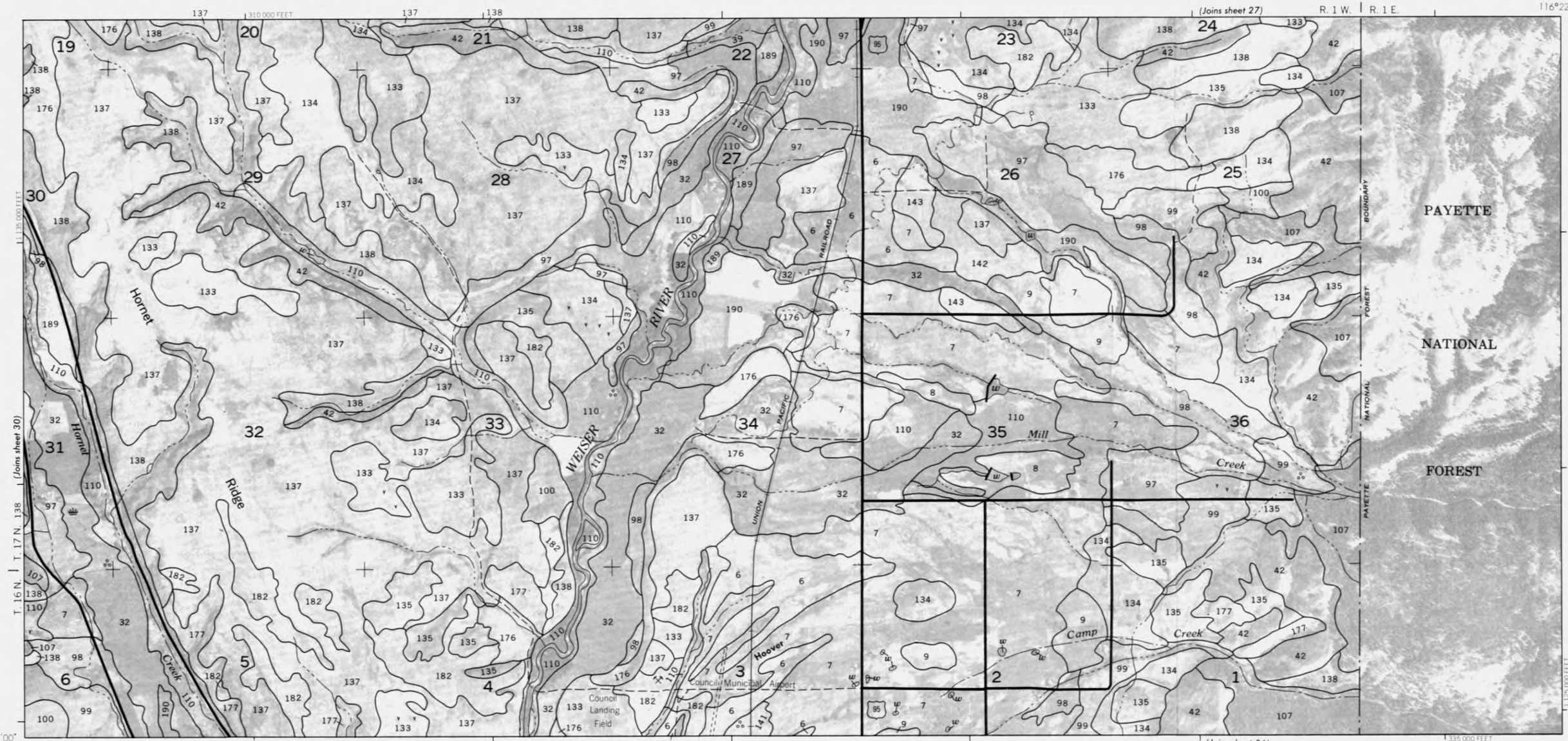
44°45'00"
116°30'00"

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N



1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

117°7'30"
44°45'00"

117°30'00"
R. 6 W.
175 000 FEET
44°45'30"
1 122 000 FEET
T. 16 N.
1 125 000 FEET
RESERVOIR
OREGON
IDAHO
BROWNLEE
COUNTY
COUNTY
SNAKE
RIVER
BAKER
WASHINGTON
88
14
1
180
74
(Joins sheet 29)
(Joins sheet 32)
170 000 FEET
3000 AND 5000-FOOT GRID TICKS
44°45'00"
117°00'00"

R. 6 W.
(Joins inset)
175 000 FEET
1 125 000 FEET
OREGON
IDAHO
BROWNLEE RESERVOIR
COUNTY
COUNTY
BAKER
WASHINGTON
SNAKE
RIVER
Brownlee Reservoir
Cottonwood
Jackson
Gulch
Deer
Gulch
Creek
1
2
10
11
12
13
14
15
22
23
24
180
95
14
74
0
70
88
87
72
61
177
42
43
T. 16 N.
1 125 000 FEET
(Joins sheet 33)
145 000 FEET
180
(Joins sheet 37)
42°30'00"
117°00'00"

1 3/4 1/2 1/4 0 1 2 MILES
1 0.5 0 1 2 KILOMETERS
SCALE 1:24 000

N

R. 6 W. | R. 5 W. | R. 5 W. | R. 4 W.

116°52'30"

44°45'00"

180 000 FEET

1 125 000 FEET

T. 16 N.

(Joins sheet 32)

(Joins sheet 29)

(Joins sheet 34)

1 115 000 FEET

Creek

Cave

Creek

Creek

Brownlee

Creek

Brownlee

Fork

Cherry

Creek

West

Middle

Gulch

Gulch

Box

Stickney

West Fork

PAYETTE NATIONAL FOREST BOUNDARY

PAYETTE NATIONAL FOREST

(Joins sheet 38)

205 000 FEET

44°42'30"

117°00'00"

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

116°52'30"
44°45'00"

R. 4 W. | R. 3 W.

240 000 FEET

1 125 000 FEET

T. 16 N.

(Joins inset, sheet 24)

(Joins sheet 33)

East Brownlee Creek

Long Gulch

PAYETTE NATIONAL FOREST BOUNDARY

PAYETTE NATIONAL FOREST

1 115 000 FEET

210 000 FEET

(Joins sheet 39)

44°42'30"
116°45'00"

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

275 000 FEET

(Joins sheet 30)

R. 2 W. | R. 1 W.

116°30'00"

44°45'00"

T. 16 N.

1 120 000 FEET

PAYETTE NATIONAL FOREST

PAYETTE NATIONAL FOREST BOUNDARY

Jackson Creek

Little Johnson Creek

Johnson Creek

1 6 7 12 13 14 18 19 22 23 24

(Joins sheet 36)

(Joins sheet 41)

44°42'30"

116°37'30"

305 000 FEET

1 110 000 FEET

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

116°30'00"
44°45'00"

(Joins sheet 31)

R. 1 W. | R. 1 E.

335 000 FEET

1 120 000 FEET

T. 16 N.

(Joins sheet 35)

1 110 000 FEET

310 000 FEET

(Joins sheet 42)

44°42'30"
116°22'30"

Hornet Creek
Hornet Ridge
WEISER RIVER
Canyon Grossen Creek
Cool Creek
Lester Creek
PACIFIC RAILROAD
UNION PACIFIC RAILROAD
Council
water
int
PAYETTE NATIONAL FOREST
PAYETTE NATIONAL FOREST BOUNDARY

1 3/4 1/2 1/4 0 1 2 MILES
1 0.5 0 1 2 KILOMETERS
SCALE 1:24 000

N

137 000 FEET R. 7 W. 117°7'30" 44°35'00"

1 065 000 FEET

T. 14 N.

BROWNLEE RESERVOIR

BAKER COUNTY WASHINGTON COUNTY OREGON IDAHO

94 94 93 162 162 87 12

(Joins sheet 55)

OREGON IDAHO RIVER

BAKER COUNTY WASHINGTON COUNTY SNAKE

Black Canyon

162 87 13 162 162 88 24 162

1 055 000 FEET

44°40'00" 117°8'45"

137 000 FEET (Joins sheet 61) 142 000 FEET

1 155 000 FEET 14 R. 6 W. (Joins sheet 32) 117°00'00" 44°42'30"

1 110 000 FEET

70 22 87 70 23 24 177 Cottonwood Creek 177 42 42 42 177 177 43 43 177 42 136 42 25 107 107 177 107 180 107 177 107 177 180 36 177 107 180 107 177 107

Jackson Gulch

180 87 43 72 177 43 14 87 43 14 87 14 177 138 88 88 88 162 162 162 162 Gulch Reservoir Gulch 87 180 33 Sturgill 34 35 87 162 162 87 111 Creek 162 162 Corral Gulch 87 42 95 0 0 68 111 87 162 180 107 177 107

Lone Pine Gulch

28 27 26 166 162 14 88

OREGON IDAHO RIVER

COUNTY COUNTY SNAKE

Sturgill Rapids

BAKER WASHINGTON

PAYETTE NATIONAL FOREST BOUNDARY

PAYETTE NATIONAL FOREST

Lick Creek

5 87 4 3 111 87 162 Garden 2 Gulch 87 1 87

(Joins sheet 38)

T. 15 N. | T. 16 N.

1 100 000 FEET

44°40'00" 117°5'30"

(Joins sheet 43) 175 000 FEET

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

117°00'00"
44°42'30"

(Joins sheet 33)

R. 5 W. | R. 4 W.

1210 000 FEET

1110 000 FEET

(Joins sheet 37)

PAYETTE NATIONAL FOREST

PAYETTE NATIONAL FOREST BOUNDARY

Cherry Creek

116°36'00"
44°53'30"

R. 2 W. | R. 1 W.

305 000 FEET

1175 000 FEET

T. 18 N.

T. 15 N. | T. 16 N.

(Joins sheet 39)

PAYETTE NATIONAL FOREST BOUNDARY

Timber Gulch

Robinson Gulch

1165 000 FEET

280 000 FEET

(Joins sheet 21)

44°52'30"
116°30'00"

1100 000 FEET

(Joins sheet 43)

44°40'00"
116°52'30"

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

R. 4 W. | R. 3 W.

210 000 FEET

1 110 000 FEET

116°45'00"

44°42'30"

PAYETTE NATIONAL FOREST

PAYETTE NATIONAL FOREST BOUNDARY

Pine Creek

Pole Cr.

Mill Creek

Little Pine Creek

East Pine Creek

Camp Creek

CANAL

101

71

99

T. 15 N. | T. 16 N.

44°40'00"

116°52'30"

1 095 000 FEET

1 235 000 FEET

(Joins sheet 40)

(Joins sheet 44)

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

116°45'00"
44°42'30"

R. 3 W. | R. 4 W.

270,000 FEET

1,010,000 FEET

PAYETTE NATIONAL FOREST

PAYETTE NATIONAL FOREST BOUNDARY

Camp Creek

Beaver Creek

Rattlesnake Gulch

Rush Creek

Deer Creek

Grizzley Creek

Rock Creek

Crow Creek

Creek

31 32 33 34 35 36 31

6 5 4 3 2 1 6

T. 15 N. | T. 16 N.

(Joins sheet 39)

(Joins sheet 41)

(Joins sheet 45)

1,005,000 FEET

240,000 FEET

44°40'00"
116°37'30"

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

275,000 FEET

(Joins sheet 35)

R. 2 W. | R. 1 W.

116°30'00"

44°42'30"

1,105,000 FEET

PAYETTE NATIONAL FOREST

BOUNDARY

FOREST

NATIONAL

PAYETTE

Little Johnson Creek

Johnson Creek

Goodrich Creek

Jackson Creek

WEISER RIVER

UNION PACIFIC

(Joins sheet 40)

(Joins sheet 42)

IDAHO

ADAMS COUNTY

T. 16 N.

T. 15 N.

44°40'00"

116°37'30"

(Joins sheet 46)

300,000 FEET

1,105,000 FEET

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

116°30'00"

44°42'30"

(Joins sheet 36)

R. 1 W.

R. 1 E.

335 000 FEET

PAYETTE NATIONAL FOREST

PAYETTE NATIONAL FOREST BOUNDARY

Lester Creek

RIVER

WEISER

Cottonwood Creek

Mesa Siding

PACIFIC RAILROAD

UNION PACIFIC RAILROAD

(Joins sheet 41)

(Joins sheet 47)

(Joins inset, sheet 54)

T. 15 N. | T. 16 N.

1 095 000 FEET

1 105 000 FEET

305 000 FEET

44°40'00"

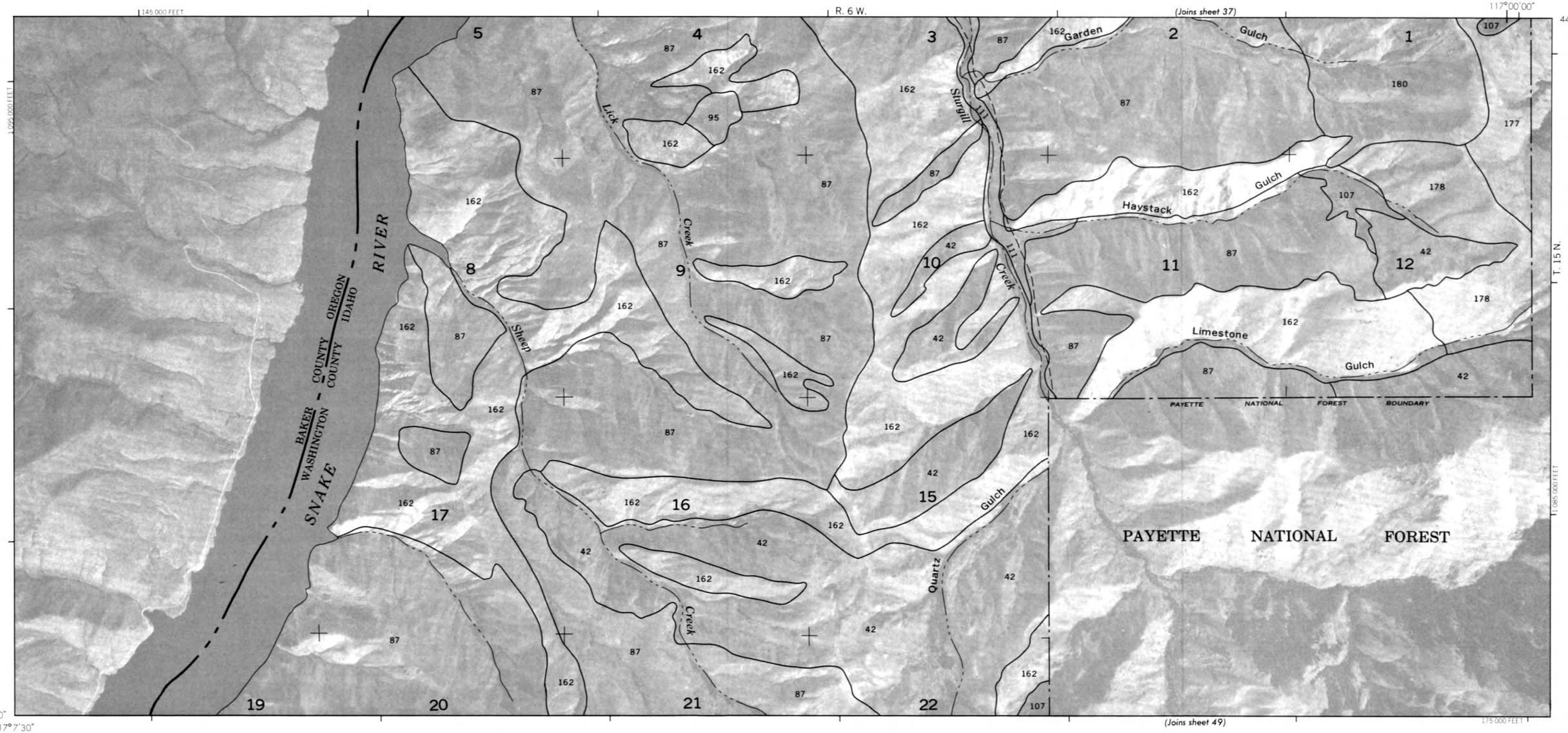
116°22'30"

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N


145 000 FEET
R. 6 W.
(Joins sheet 38)
(Joins sheet 37)
117°00'00"
44°40'00"
1 095 000 FEET
T. 15 N.
1 085 000 FEET
175 000 FEET
44°37'30"
117°7'30"
(Joins sheet 49)
OREGON
IDAHO
COUNTY
COUNTY
BAKER
WASHINGTON
SNAKE RIVER
Lick Creek
Sheep Creek
Sturgill Creek
Garden Gulch
Haystack Gulch
Limestone Gulch
Quartz Gulch
Gulch
PAYETTE NATIONAL FOREST BOUNDARY
PAYETTE NATIONAL FOREST
1 3/4 1/2 1/4 0 1 2 MILES
1 0.5 0 1 2 KILOMETERS
SCALE 1:24 000

N

116°52'30"
44°40'00"

(Joins sheet 39)

235 000 FEET

R. 4 W. | R. 3 W.

1 095 000 FEET

T. 15 N.

(Joins sheet 45)

PAYETTE NATIONAL FOREST

BOUNDARY

Pine Creek

East Pine Creek

Advent Gulch

Camp Creek

Gulch Creek

1 085 000 FEET

210 000 FEET

(Joins sheet 50)

44°37'30"
116°45'00"

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

R. 3 W. | R. 2 W.

240,000 FEET

1,090,000 FEET

116°37'30"

44°40'00"

44°37'30"

116° 45'00"

T. 15 N.

(Joins sheet 40)

(Joins sheet 44)

(Joins sheet 46)

(Joins sheet 51)

270,000 FEET

1,080,000 FEET

Spring Creek

Rattlesnake Gulch

Beaver Creek

Rush Creek

Grizzley Creek

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

116° 37'30"
44°40'00"

R. 2 W. | R. 1 W.

300,000 FEET

T. 15 N.

1,090,000 FEET

275,000 FEET

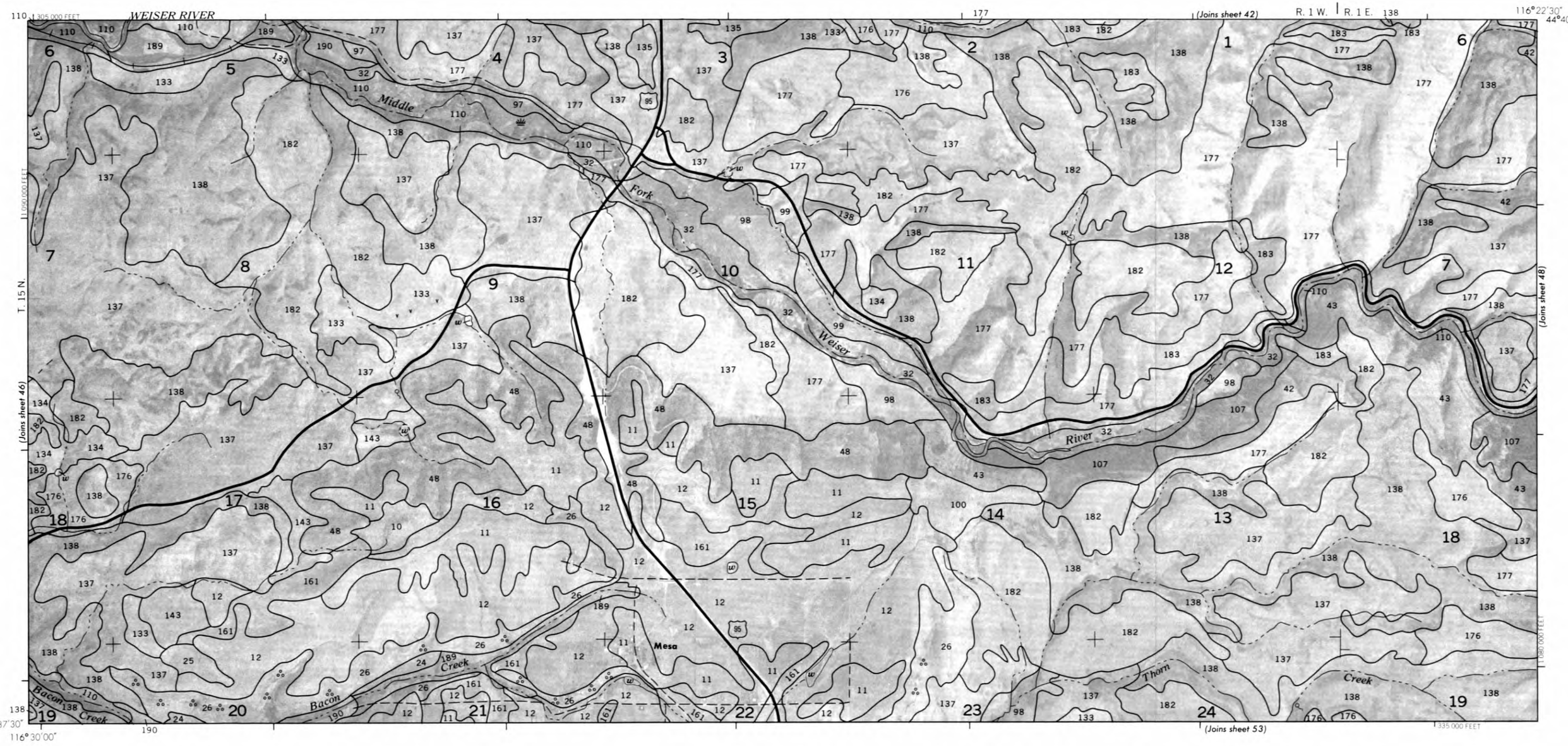
44°37'30"
116°30'00"

(Joins sheet 41)
(Joins sheet 45)
(Joins sheet 47)
(Joins sheet 52)

ADAMS
WASHINGTON
COUNTY
COUNTY
IDAHO
IDAHO
PACIFIC
UNION
PACIFIC
UNION
RIVER
WEISER
Goodrich
Creek
Cow Creek
Grizzley Creek
Bacon Creek
Goodrich

1 3/4 1/2 1/4 0 1 2 MILES
1 0.5 0 1 2 KILOMETERS
SCALE 1:24 000

N



1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

116°22'30"
44°40'00"

R. 1 E. | R. 2 E.

365,000 FEET

T. 15 N

1,080,000 FEET

340,000 FEET

44°37'30"
116°15'00"

(Joins inset, sheet 54)

(Joins sheet 47)

(Joins sheet 54)

PAYETTE NATIONAL FOREST

NATIONAL FOREST BOUNDARY

PAYETTE NATIONAL FOREST BOUNDARY

Long Gulch

Oven Gulch

Dutch Gulch

Weiser River

Middle Fork

Fall Creek

Little Fall Creek

5 6 7 8 16 17 18 19 20

42 177 138 182 137 107 110 41 43 176

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

145,000 FEET R. 6 W. (Joins sheet 43) 117°01'30" 44°37'30"

1,080,000 FEET

SNAKE RIVER RESERVOIR

OREGON IDAHO

BAKER COUNTY WASHINGTON COUNTY

BROWNLEE RESERVOIR

Creek Wayle Creek Raft Creek Dennett Creek North Fork

PAYETTE NATIONAL FOREST BOUNDARY

19 20 21 22 27 28 29 30 31 32 33 34 4 5 6

87 162 180 42 107 138

T. 14 N. | T. 15 N.

1,070,000 FEET

44°35'00" 117°7'30"

(Joins sheet 55) 149,000 FEET

203,000 FEET R. 5 W. (Joins sheet 50) 116°52'30" 44°35'00"

1,065,000 FEET

PAYETTE NATIONAL FOREST BOUNDARY

6 7 18

107 138 176

T. 14 N.

(Joins sheet 56)

1,060,000 FEET

44°32'30" 116°53'30"

(Joins sheet 63) 206,000 FEET

3000 AND 5000-FOOT GRID TICKS

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

116°52'30"
44°37'30"
(Joins sheet 44)
R. 4 W.
R. 3 W.
235,000 FEET
1,075,000 FEET
PAYETTE
NATIONAL
FOREST
BOUNDARY
NATIONAL
PAYETTE
FOREST
Spring
Creek
Tamarack
Creek
Gulch
Surdam
West
Pine
Creek
20
21
22
23
24
19
29
28
27
26
25
30
32
33
34
35
36
31
6
5
4
3
2
1
(Joins sheet 51)
(Joins sheet 56)
1,065,000 FEET
210,000 FEET
44°32'30"
116°45'00"
T. 14 N.
T. 15 N.
SCALE 1:24 000
2 MILES
2 KILOMETERS

N

R. 3 W. | R. 2 W.

240 000 FEET

116°37'30"

44°37'30"

(Joins sheet 45)

(Joins sheet 50)

(Joins sheet 52)

1 075 000 FEET

T. 15 N. | T. 14 N.

44°35'00"

116°45'00"

(Joins sheet 57)

270 000 FEET

1 065 000 FEET

Camp Creek

Spring Creek

Rush Creek

Pine Creek

West Pine Creek

Creek

WEISER RIVER

PACIFIC UNION

SCALE 1:24 000

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

N

116°37'30"
44°37'30"

R. 2 W. | R. 1 W.

(Joins sheet 46)

ADAMS COUNTY
WASHINGTON COUNTY
IDAHO COUNTY
IDAHO COUNTY

RAILROAD
PACIFIC UNION 101
RIVER
WEISER
WEISER RIVER
LITTLE

(Joins sheet 51)
(Joins sheet 53)
(Joins sheet 58)

375 000 FEET
1 065 000 FEET
1 075 000 FEET

T. 14 N. | T. 15 N.

44°35'00"
116°30'00"

SCALE 1:24 000

1 3/4 1/2 1/4 0 1 2 MILES
1 0.5 0 1 2 KILOMETERS

N

305 000 FEET

1 078 000 FEET

R. 1 W. | R. 1 E.

116°22'30"

44°37'30"

(Joins sheet 47)

(Joins sheet 52)

(Joins sheet 54)

(Joins sheet 59)

335 000 FEET

T. 14 N. | T. 15 N.

44°35'00"

116°30'00"

INDIAN VALLEY

Bacon Creek

Thorn Creek

Graus Creek

Little Weiser River

North Fork Weiser River

Thorn Creek

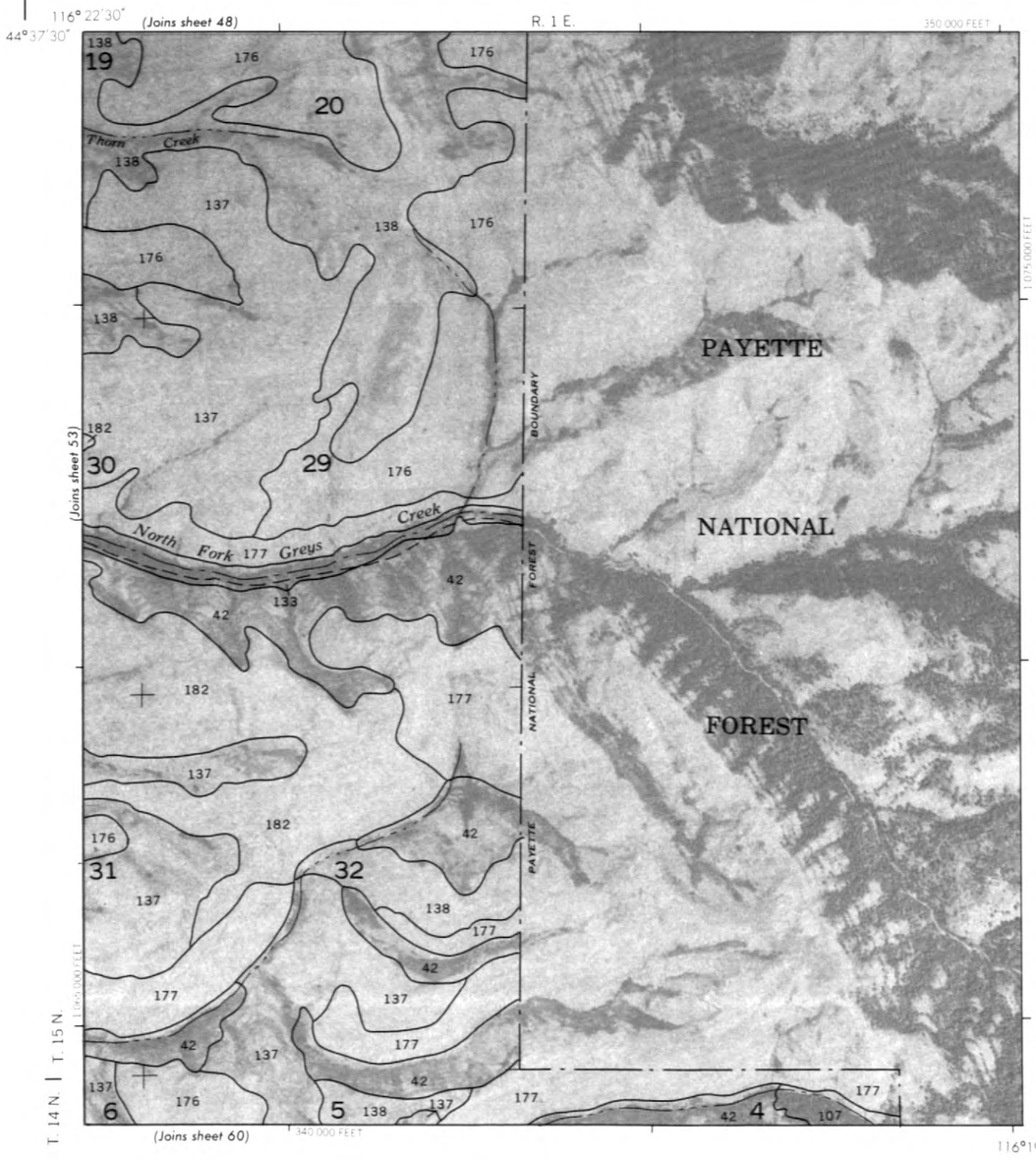
Graus Creek

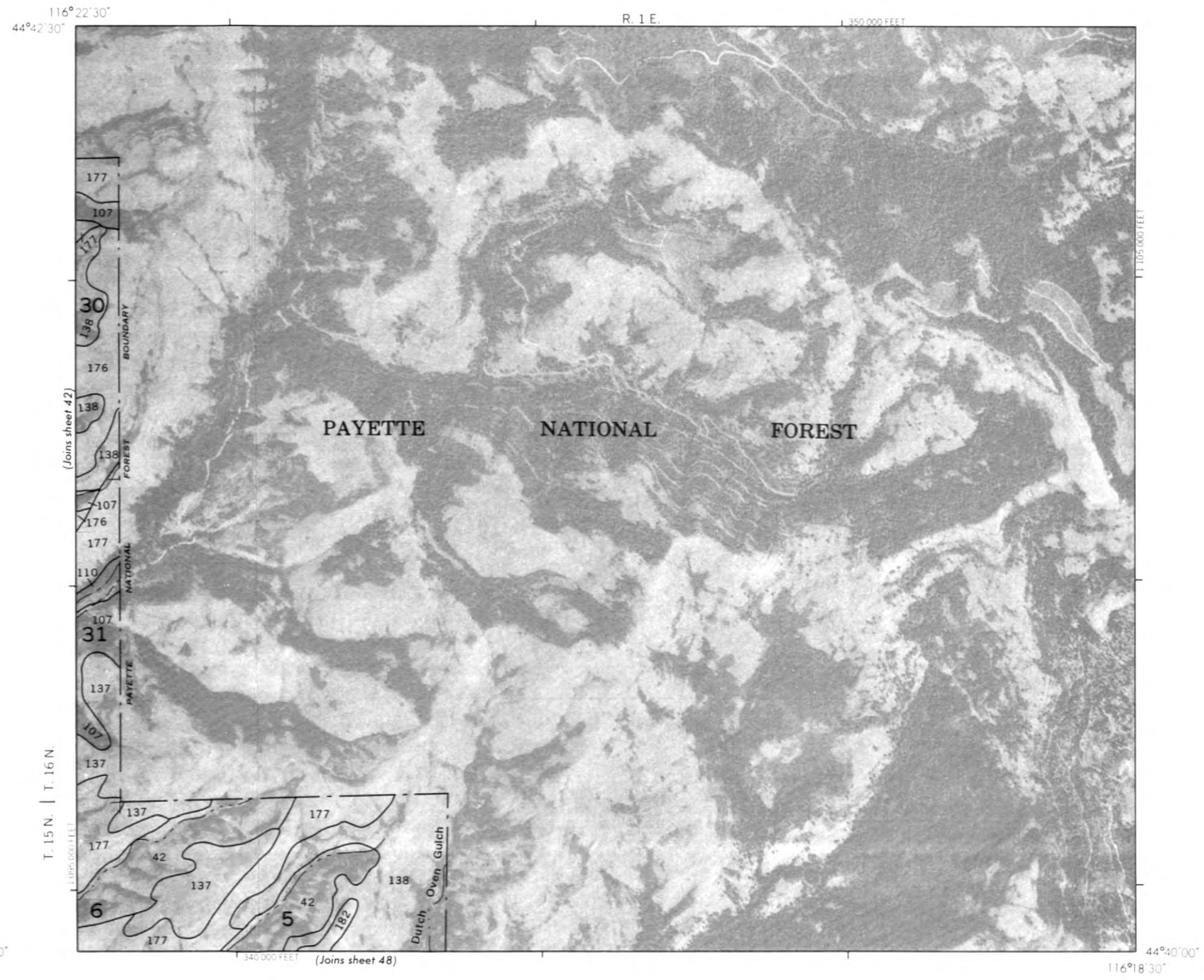
SCALE 1:24 000

1 MILE

1 KILOMETER

N





1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

R. 7 W. | R. 6 W.

145 000 FEET

(Joins sheet 49)

117°00'00"

44°35'00"

1 095 000 FEET

T. 14 N.

(Joins inset, sheet 37)

OR
IDAHO
SNAKE RIVER

BIG HILL

Mineral

Dennett

Black Canyon

Tartar Gulch

North Fork

Middle Fork

Creek

Chinaman's Hat

PAYETTE NATIONAL FOREST BOUNDARY

PAYETTE

NATIONAL

FOREST

1 2 3 4 5 6 7 8 9 10 11 12 13 15 16 17 18

42 73 87 88 94 107 138 149 162 177

44°32'30"

117° 7'30"

(Joins sheet 62)

170 000 FEET

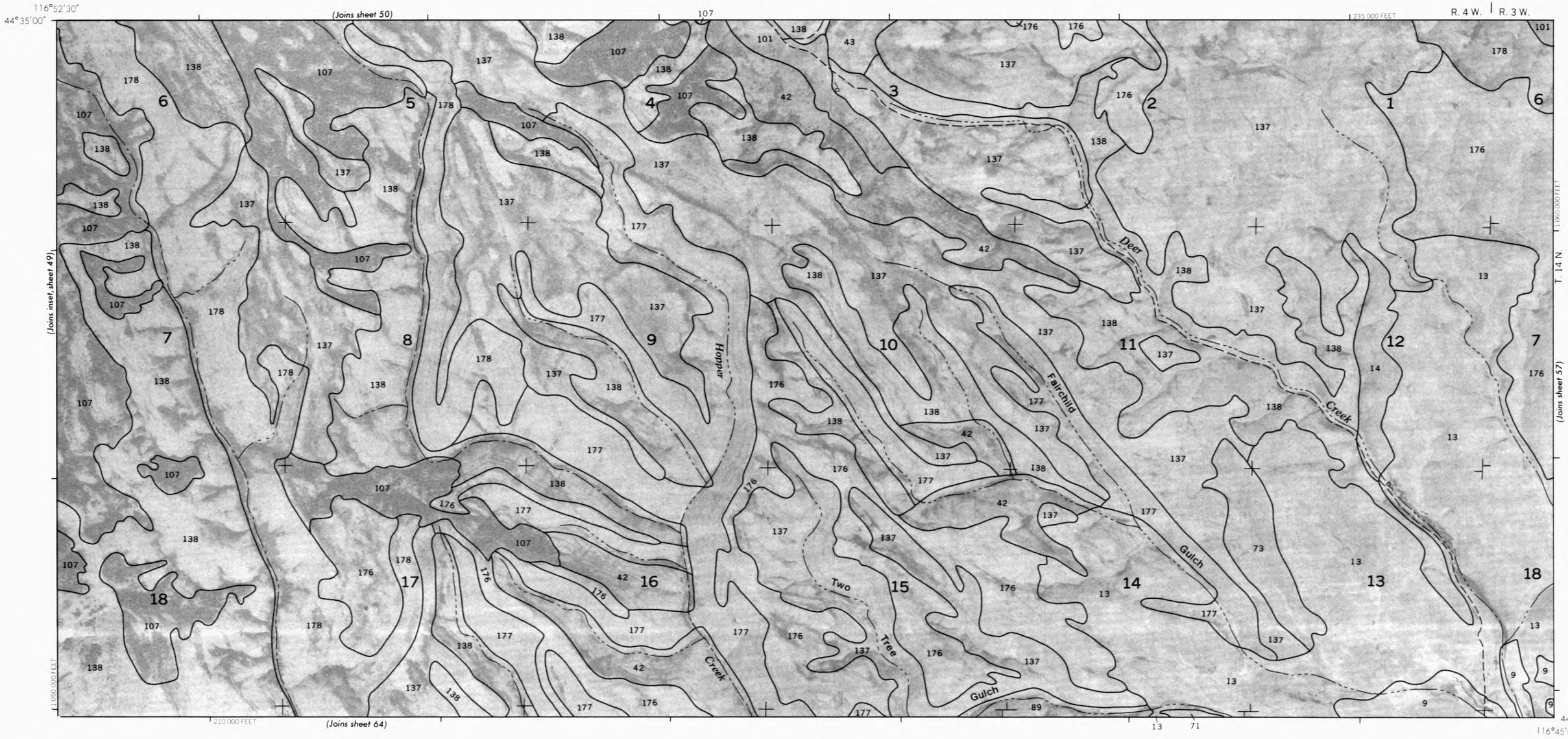
1 095 000 FEET

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N


116°52'30"
44°35'00"
(Joins sheet 50)
107
235 000 FEET
R. 4 W.
R. 3 W.
T. 14 N.
1 060 000 FEET
(Joins inset, sheet 49)
(Joins sheet 57)
1 050 000 FEET
210 000 FEET
(Joins sheet 64)
44°32'30"
116°45'00"
Hopper
Deer
Fairchild
Creek
Gulch
Two
Tree
Creek
Gulch
1 3/4 1/2 1/4 0 1 2 MILES
1 0.5 0 1 2 KILOMETERS
SCALE 1:24 000

N

240 000 FEET

R. 3 W. | R. 2 W.

116°37'30"

44°35'00"

(Joins sheet 51)

1 050 000 FEET

T. 14 N.

(Joins sheet 56)

Cambridge

Pine

Spring Creek

Pine Creek

Rush Creek

Creek

Creek

Creek

RIVER

PACIFIC UNION

RAILROAD

Sewage Disposal

WEISER

Little Weiser River

(Joins sheet 58)

1 050 000 FEET

44°32'30"

116°45'00"

137

(Joins sheet 65)

270 000 FEET

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

116°37'30"
44°35'00"

(Joins sheet 52)

R. 2 W. | R. 1 W.

300 000 FEET

WEISER RIVER

(Joins sheet 57)

RIVER

WEISER

LITTLE

CANAL

COUNTY

ADAMS

WASHINGTON

T. 14 N.

(Joins sheet 59)

1 060 000 FEET

1 050 000 FEET

275 000 FEET

(Joins sheet 66)

44°32'30"
116°30'00"

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

305 000 FEET

39

(Joins sheet 53)

R. 1 W. | R. 1 E.

116°22'30"

44°35'00"

1 060 000 FEET

T. 14 N.

(Joins sheet 58)

(Joins sheet 60)

INDIAN VALLEY

Little Weiser River

Greys Creek

Greys Creek

Indian Valley Road

Gulch

Monday Gulch

int

(Joins sheet 67)

335 000 FEET

44°32'30"

116°30'00"

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

116°22'30"
44°35'00"

R. 1 E. | R. 2 E.

365 000 FEET

1 060 000 FEET

T. 14 N.

(Joins sheet 54)

(Joins sheet 59)

1 050 000 FEET

340 000 FEET

(Joins sheet 68)

44°32'30"
116°15'00"

PAYETTE NATIONAL FOREST

PAYETTE NATIONAL FOREST BOUNDARY

Gulch Road

Creek

Murphy Creek

Creek

Park

South Fork

Grays Creek

Creek

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

1 110 000 FEET

1 050 000 FEET

(Joins inset, sheet 37)

R. 7 W.

117°7'30"

44°32'30"

BROWNLEE RESERVOIR

SNAKE RIVER

OREGON COUNTY

IDAHO COUNTY

BAKER

WASHINGTON

Golden Goose Canyon

Sumac Creek

Wolf Trail Creek

23 24 25 26 27 33 34 35 36

T. 14 N.

1 040 000 FEET

(Joins sheet 62)

(Joins sheet 69)

1 140 000 FEET

44°30'00"

117°15'00"

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

117° 7'30"
44° 32'30"
R. 7 W. | R. 6 W.
(Joins sheet 55)
170 000 FEET
1 050 000 FEET
T. 14 N.
(Joins sheet 61)
(Joins sheet 63)
(Joins sheet 70)
145 000 FEET
1 040 000 FEET
44° 30'00"
117°00'00"

Donnett
McChord Butte
Sunrise Creek
Spring Creek
Thorn Creek
Wolf Creek
PAYETTE NATIONAL FOREST BOUNDARY
PAYETTE NATIONAL FOREST

19 20 21 22
24 25 29 28 27
30 31 32 33 34
36

1 3/4 1/2 1/4 0 1 2 MILES
1 0.5 0 1 2 KILOMETERS
SCALE 1:24 000

N

R. 6 W. | R. 5 W.

R. 5 W. | R. 4 W.

116°52'30"

44°32'30"

175 000 FEET

1 050 000 FEET

(Joins inset, sheet 49)

(Joins sheet 64)

T. 14 N.

(Joins sheet 62)

PAYETTE NATIONAL FOREST

PAYETTE NATIONAL FOREST BOUNDARY

Sage Creek

27 26 25 24 34 35 36

42 107 137 138 176 177

44°30'00"

117°00'00"

(Joins sheet 71)

205 000 FEET

1 050 000 FEET

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

116°52'30"
44°32'30"

(Joins sheet 56)

235 000 FEET

R. 4 W. R. 3 W.

1 045 000 FEET

T. 14 N.

(Joins sheet 63)

(Joins sheet 65)

1 035 000 FEET

210 000 FEET

(Joins sheet 72)

44°30'00"
116°45'00"

Hopper

Keithly

Creek

Looney Spring

Dry Creek

Reservoir

SHOE PEG VALLEY

19 20 21 22 23 24 19
30 29 28 27 26 25 30
31 32 33 34 35 36 31

1 3/4 1/2 1/4 0 1 2 MILES
1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

R. 3 W. | R. 2 W.

116°37'30"

44°32'30"

240 000 FEET

1 045 000 FEET

T. 14 N.

(Joins sheet 57)

(Joins sheet 66)

(Joins sheet 64)

(Joins sheet 73)

270 000 FEET

1 050 000 FEET

44°30'00"

116° 45'00"

32 155

Deer Creek

RIVER

RAILROAD

PACIFIC

UNION

WEISER

SHOE PEG VALLEY

MIDDLE VALLEY

Keithu Creek

Reservoir

int

SCALE 1:24 000

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

N

116°37'30"
44°32'30"

R. 2 W. | R. 1 W.

300 000 FEET

(Joins sheet 58)

(Joins sheet 65)

WASHINGTON COUNTY
ADAMS COUNTY

T. 14 N.

1 045 000 FEET

(Joins sheet 67)

Monday

1 035 000 FEET

275 000 FEET

(Joins sheet 74)

44°30'00"
116°30'00"

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

305 000 FEET

190 32

(Joins sheet 59)

R. 1 W. | R. 1 E.

116° 22'30"

44°32'30"

1 045 000 FEET

T. 14 N.

(Joins sheet 66)

(Joins sheet 68)

1 035 000 FEET

Gulch

Monday

Ben Ross Reservoir

Little Weiser River

Cryus

South Fork Creek

44°30'00"

116° 30'00"

(Joins sheet 75)

1 335 000 FEET

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

116° 22'30"

44°32'30"

R. 1 E. | R. 2 E.

365 000 FEET

1 045 000 FEET

T. 14 N.

(Joins sheet 60)

(Joins sheet 67)

PAYETTE NATIONAL FOREST

FOREST BOUNDARY

PAYETTE NATIONAL

Creek

Graus

Hill

King

Weiser River

Dog Creek

Little Weiser

19 20 21 22

30 29 28 27

31 32 33 34

1 035 000 FEET

340 000 FEET

(Joins sheet 76)

44°30'00"

116°15'00"

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

110 000 FEET

1 035 000 FEET

R. 7 W.

(Joins sheet 61)

117° 7'30"

44°30'00"

T. 14 N.

T. 13 N.

BAKER COUNTY
WASHINGTON COUNTY
OREGON
IDAHO

SNAKE RIVER

Trail Creek

Rock Creek

(Joins sheet 70)

1 025 000 FEET

44°27'30"

117°15'00"

(Joins sheet 77)

140 000 FEET

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

117° 7'30"
44°30'00"

(Joins sheet 62)

R. 6 W.

T. 14 N. | T. 13 N.

PAYETTE NATIONAL FOREST BOUNDARY

170,000 FEET

(Joins sheet 71)

(Joins sheet 69)

1,005,000 FEET

Rock Creek

Little Rock Creek

Monroe Creek

145,000 FEET

(Joins sheet 78)

44°27'30"
117°00'00"

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

R. 6 W. | R. 5 W.

175,000 FEET

T. 14 N.

T. 13 N.

116°52'30"
44°30'00"

(Joins sheet 63)

PAYETTE NATIONAL FOREST

PAYETTE NATIONAL FOREST BOUNDARY

Fir Creek

Mann Creek

Sagle Creek

water

(Joins sheet 70)

(Joins sheet 72)

(Joins sheet 79)

4,130,000 FEET

4,120,000 FEET

205,000 FEET

44°27'30"
117°00'00"

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

116°52'30"
44°30'00"

(Joins sheet 64)

235,000 FEET

R. 4 W. | R. 3 W.

T. 14 N. | T. 13 N.

1,030,000 FEET

(Joins sheet 73)

(Joins sheet 71)

1,020,000 FEET

210,000 FEET

(Joins sheet 80)

44°27'30"
116°45'00"

Keithy Creek

Reservoir

Dry Creek

PEG LEG VALLEY

SHOE Creek

Midvale Airport

Sage Creek

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

T. 14 N.
T. 13 N.
240 000 FEET
1 030 000 FEET
R. 3 W.
32
116°37'30"
44°30'00"
44°27'30"
116°45'00"
1 020 000 FEET
270 000 FEET

(Joins sheet 65)
(Joins sheet 72)
(Joins sheet 74)
(Joins sheet 81)

WEISER R
Valley
Keithly
Creek
RIVER
Peg
WEISER
VALLEY
CANAL
Pioneer
Midvale
Shoe
Creek
PACIFIC
UNION
RAILROAD
Dry
Creek
Beaver
MIDDLE
Creek
Creek

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

1 3/4 1/2 1/4 0 1 2 MILES
1 0.5 0 1 2 KILOMETERS
SCALE 1:24 000

N

116°37'30"
44°30'00"

R. 2 W. | R. 1 W.

300 000 FEET

T. 14 N. | T. 13 N.

1 030 000 FEET

(Joins sheet 66)

(Joins sheet 73)

(Joins sheet 75)

1 020 000 FEET

275 000 FEET

(Joins sheet 82)

44°27'30"
116°30'00"

Dixie Creek

ADAMS
WASHINGTON
COUNTY
COUNTY

Hou Creek

Dixie

water

SCALE 1:24 000

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

N

T. 14 N.
T. 13 N.
305 000 FEET
1 030 000 FEET
27
138
(Joins sheet 67)
R. 1 W.
R. 1 E.
116°22'30"
44°30'00"
(Joins sheet 64)
(Joins sheet 76)
1 020 000 FEET
1 335 000 FEET
(Joins sheet 83)
44°27'30"
116°30'00"

Monday Gulch
Hog Creek
Granger Creek
Little Weiser River
LAVA FLAT
BEDROCK FLAT
ADAMS COUNTY
WASHINGTON COUNTY
IDAHO COUNTY
IDAHO COUNTY
int
w

1 3/4 1/2 1/4 0 1 2 MILES
1 0.5 0 1 2 KILOMETERS
SCALE 1:24 000

N

116°22'30"
44°30'00"

R. 1 E. | R. 2 E.

T. 13 N. | T. 14 N.

(Joins sheet 68)

(Joins sheet 75)

(Joins sheet 84)

1 020 000 FEET

1 340 000 FEET

365 000 FEET

1 030 000 FEET

Bull Gulch

Twin Sisters

Little Weiser River

Griezley Creek

Mill Creek

Carson Gulch

Creek

PAYETTE NATIONAL FOREST BOUNDARY

PAYETTE NATIONAL FOREST

44°27'30"
116°15'00"

SCALE 1:24 000

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

N

110 000 FEET

R. 7 W.

117°7'30"

44°27'30"

(Joins sheet 69)

1 020 000 FEET

T. 13 N.

RESERVOIR

COUNTY OREGON

COUNTY IDAHO

SNAKE RIVER

BROWNLEE

BAKER

WASHINGTON

Little Rock Creek

(Joins sheet 78)

1 010 000 FEET

44°25'00"

117°15'00"

89 73

(Joins sheet 85)

140 000 FEET

SCALE 1:24 000

N

117°7'30"
44°27'30"

(Joins sheet 70)

R. 6 W.

170,000 FEET

(Joins sheet 77)

110,000 FEET

T. 13 N.

(Joins sheet 79)

145,000 FEET

(Joins sheet 86)

44°25'00"
117°00'00"

Rock Creek
Little Rock Creek
Monroe Creek
Rock Creek
Randall

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

79

N

R. 6 W. | R. 5 W.

175,000 FEET

116°22'30"
44°27'30"

(Joins sheet 71)

T. 13 N.

015,000 FEET

(Joins sheet 78)

(Joins sheet 80)

Reservoir

Mann Creek

Creek

Monroe Creek

(Joins sheet 87)

205,000 FEET

44°25'00"
117°00'00"

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

80

N

116°52'30"

44°27'30"

R. 4 W. | R. 3 W.

235,000 FEET

1,015,000 FEET

(Joins sheet 72)

(Joins sheet 79)

(Joins sheet 81)

(Joins sheet 88)

T. 13 N.

Sage Creek

Greenfield Spring

Reservoir

Sheep Creek

Pole Creek

WEISER RIVER

UNION PACIFIC RAILROAD

210,000 FEET

44°25'00"

116°45'00"

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

81

N

240,000 FEET

R. 3 W.

(Joins sheet 73)

116°37'30"

44°27'30"

1,015,000 FEET

T. 13 N.

(Joins sheet 80)

(Joins sheet 82)

1,005,000 FEET

44°25'00"

116°45'00"

(Joins sheet 89)

270,000 FEET

RIVER

MIDDLE

VALLEY

RAILROAD

UNION PACIFIC

WEISER

CANAL

Deep Creek

Pole Creek

Banner

Reservoir

Creek

She

Creek

SCALE 1:24 000

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

N

116°37'30"
44°27'30"

R. 2 W. | R. 1 W.

300,000 FEET

1,015,000 FEET

T. 13 N.

1,005,000 FEET

275,000 FEET

44°25'00"
116°30'00"

(Joins sheet 74)

(Joins sheet 81)

(Joins sheet 83)

(Joins sheet 90)

Reservoir

Hog Creek Butte

Creek

How

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

305 000 FEET

116°22'30"

42°27'30"

R. 1 W. | R. 1 E.

(Joins sheet 75)

1 015 000 FEET

T. 13 N.

(Joins sheet 82)

(Joins sheet 84)

ADAMS COUNTY IDAHO

WASHINGTON COUNTY IDAHO

Reservoir

Butte

Granger

Creek

Shirts

1 005 000 FEET

44°25'00"

116°30'00"

335 000 FEET

(Joins sheet 91)

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

116°22'30"
44°27'30"
(Joins sheet 76)
R. 1 E.
350 000 FEET
1 010 000 FEET
(Joins sheet 83)
1 000 000 FEET
340 000 FEET
(Joins sheet 92)
44°25'00"
116°18'30"
T. 13 N.
17
16
15
20
21
22
29
28
27
32
33
34
ADAMS COUNTY
WASHINGTON COUNTY
BOUNDARY
NATIONAL FOREST
BOISE
Shirts Creek
Smith Gulch
Middle Creek
WASHINGTON COUNTY
GEM COUNTY

116°22'30"
44°22'30"
(Joins sheet 92)
R. 1 E.
345 000 FEET
980 000 FEET
(Joins sheet 99)
970 000 FEET
340 000 FEET
(Joins inset, sheet 92)
44°20'00"
116°19'00"
T. 12 N.
17
16
20
21
29
28
32
33
WASHINGTON COUNTY
GEM COUNTY
Gulch Road

1 3/4 1/2 1/4 0 1 2 MILES
1 0.5 0 1 2 KILOMETERS
SCALE 1:24 000

N

110 000 FEET

R. 7 W.

74

(Joins sheet 77)

117°7'30"
44°25'00"

105 000 FEET

T. 12 N. | T. 13 N.

(Joins sheet 86)

BAKER COUNTY
WASHINGTON COUNTY
OREGON
IDAHO

SNAKE RIVER

Perkins Creek

Henley

Creek

HENLEY BASIN

Reservoir

Grouse Creek

Hog Creek

44°22'30"
117°15'00"

(Joins sheet 93)

140 000 FEET

195 000 FEET

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

117°07'30"
44°25'00"

R. 7 W. | R. 6 W.

(Joins sheet 78)

170 000 FEET

T. 12 N. | T. 13 N.

100 000 FEET

(Joins sheet 85)

(Joins sheet 87)

95 000 FEET

145 000 FEET

(Joins sheet 94)

44°22'30"
117°00'00"

Warm

Creek

Scott

SCALE 1:24 000

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

N

R. 6 W. | R. 5 W.

175 000 FEET

T. 12 N. | T. 13 N.

1 000 000 FEET

116°52'30"

44°25'00"

(Joins sheet 79)

(Joins sheet 86)

(Joins sheet 88)

(Joins sheet 95)

990 000 FEET

205 000 FEET

44°22'30"

117°00'00"

Reservoir

Creek

Jenkins

Monroe

Mann Cr

Deer

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

116°52'30"
44°25'00"

R. 4 W. | R. 3 W.

T. 13 N.
T. 12 N.

1 000 000 FEET

235 000 FEET

990 000 FEET

210 000 FEET

(Joins sheet 80)

(Joins sheet 87)

(Joins sheet 89)

(Joins sheet 96)

Diamond

RIVER

Sheep Creek

Thousand Springs Creek

Pole Creek

WEISER

Barton

UNION PACIFIC

44°22'30"
116°45'00"

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

R. 3 W. | R. 2 W.

240 000 FEET

116°37'30"

44°25'00"

T. 12 N. | T. 13 N.

1 000 000 FEET

(Joins sheet 81)

(Joins sheet 88)

(Joins sheet 90)

(Joins sheet 97)

990 000 FEET

270 000 FEET

44°22'30"

116°45'00"

Deep Creek

Pole Creek

Banner Creek

Dutch Flat

Star Butte

Little Crane Creek Reservoir

Camp Creek

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

116°37'30"
44°25'00"

R. 2 W. | R. 1 W.

300 000 FEET

T. 2 N. | T. 3 N.

1 000 000 FEET

(Joins sheet 82)

(Joins sheet 89)

(Joins sheet 91)

(Joins sheet 98)

900 000 FEET

275 000 FEET

Dutch Flat

Crane Creek Reservoir

Groner Reservoir

Crane Creek

Reservoir

44°22'30"
116°30'00"

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

305 000 FEET

(Joins sheet 83)

R. 1 W. | R. 1 E.

116°22'30"
44°25'00"

T. 12 N. | T. 13 N.

1 000 000 FEET

Groner Reservoir

North Crane Creek

Middle Crane Creek

Landing Strip

Bill George Spring

Spring Creek

Riley Butte

(Joins sheet 90)

(Joins sheet 92)

(Joins sheet 99)

980 000 FEET

335 000 FEET

44°22'30"
116°30'00"

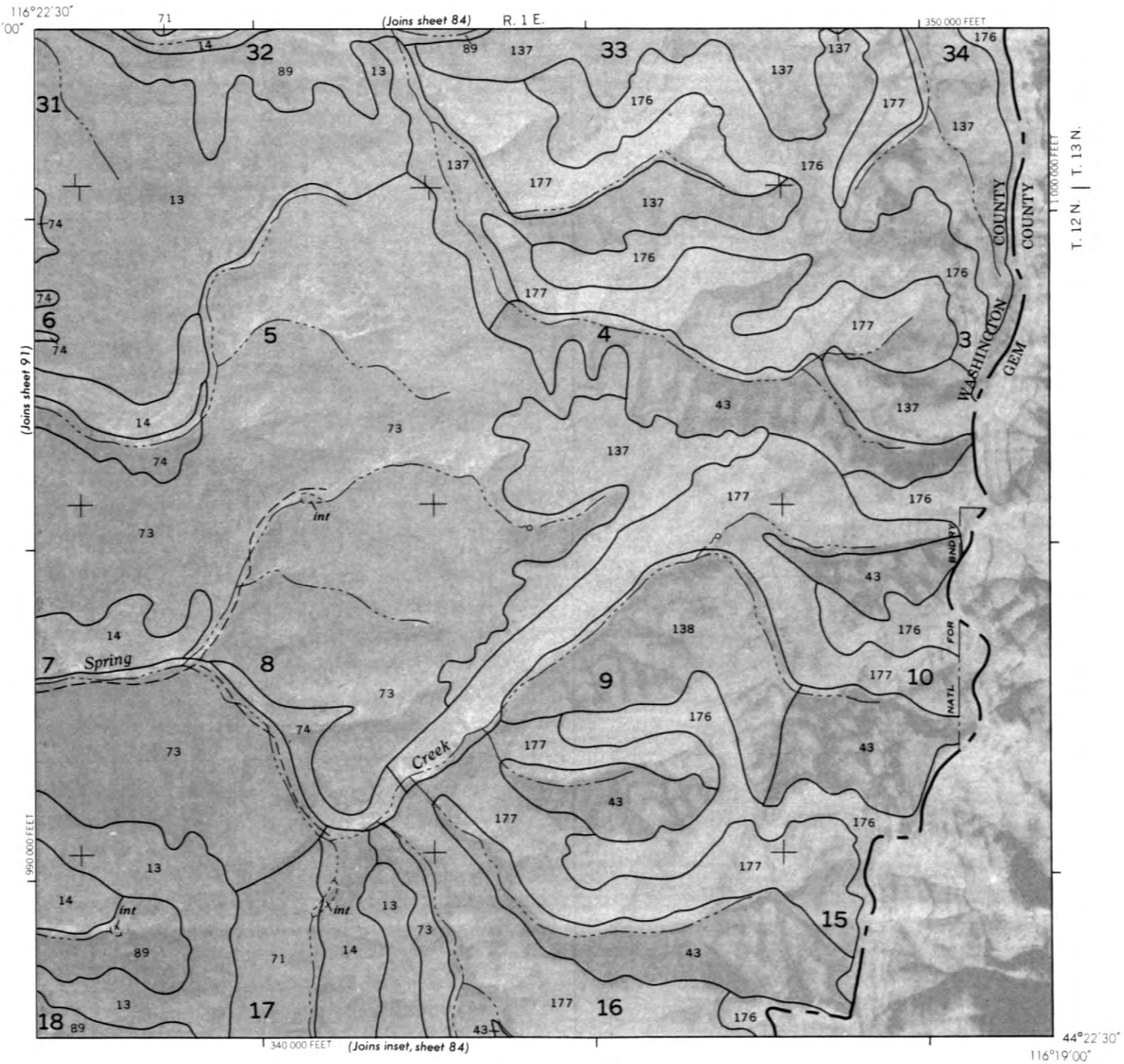
180

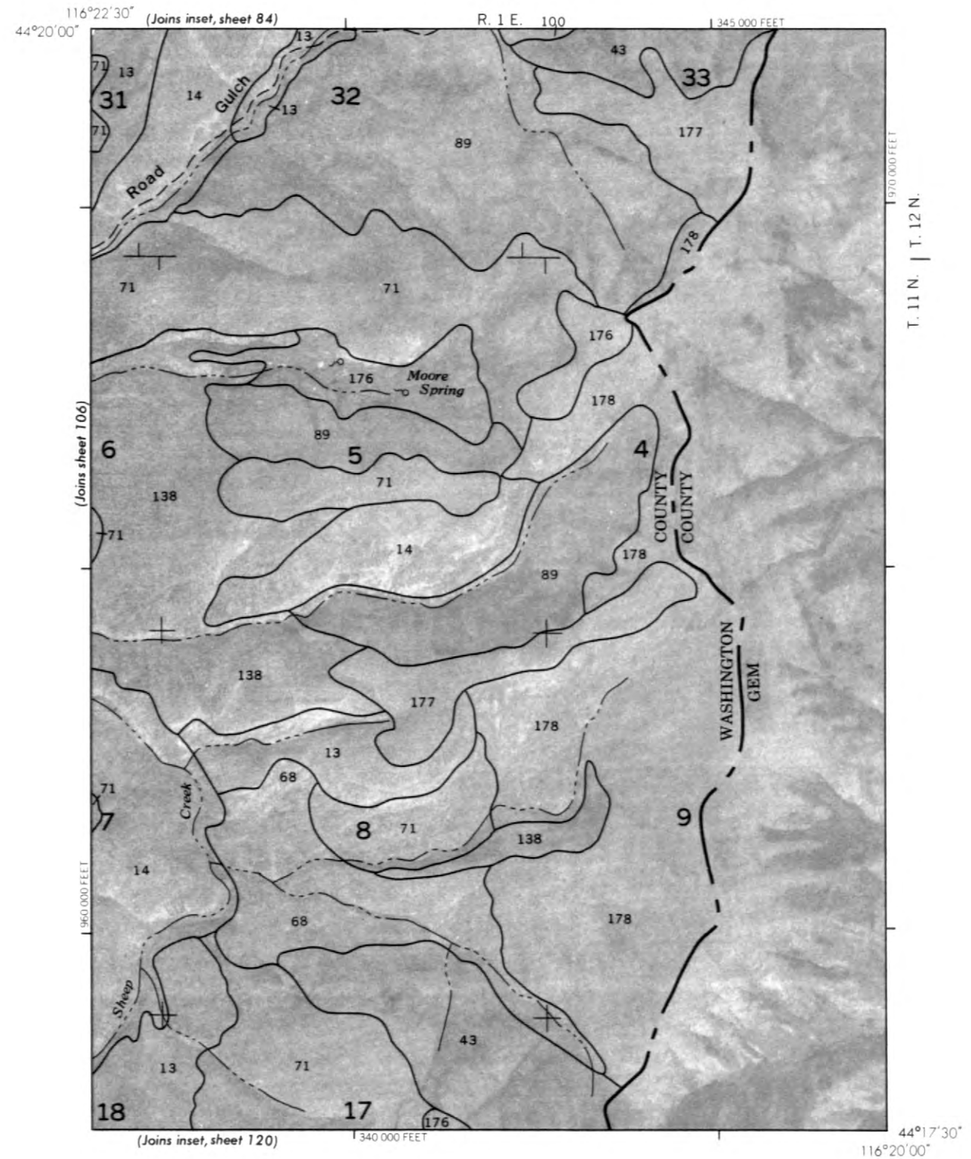
SCALE 1:24 000

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

N





1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

110 000 FEET

R. 7 W.

(Joins sheet 85)

117°7'30"

44°22'30"

990 000 FEET

T. 14 N.

(Joins sheet 94)

975 000 FEET

140 000 FEET

(Joins sheet 100)

44°20'00"

117°15'00"

SNAKE RIVER

WASHINGTON COUNTY

BAKER COUNTY

UNION COUNTY

IDAHO

OREGON

PACIFIC

Crawford Place

Devils Hole

Grouse Creek

Hog Creek

18 17 16 15 14 13

20 21 22 23 24

28 27 26 25

33 34 35 36

129 180 153 111 74 61 14 13 4 73 51 5

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

117° 7'30"
44° 22'30"

R. 7 W. | R. 6 W.

(Joins sheet 86)

170,000 FEET

985,000 FEET

T. 12 N.

(Joins sheet 93)

(Joins sheet 95)

976,000 FEET

145,000 FEET

(Joins sheet 101)

44°20'00"
117°00'00"

Kelly Mountain

Haystack

Hog Creek

Warm Springs Creek

Scott Creek

111

SCALE 1:24 000

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

95

N

210 000 FEET

R. 5 W.

(Joins sheet 87)

116°45'00"

44°22'30"

985 000 FEET

T. 12 N.

(Joins sheet 94)

(Joins sheet 96)

975 000 FEET

Jenkins Creek Reservoir

Jenkins Creek

Sheep Creek

SHEEP CREEK GRADE

Monroe Creek

Mann Creek

Monroe

44°20'00"

116°52'30"

(Joins sheet 102)

235 000 FEET

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

R. 5 W. | R. 4 W.

116°52'30"

44°22'30"

(Joins sheet 88)

235 000 FEET

985 000 FEET

T. 12 N.

(Joins sheet 95)

(Joins sheet 97)

975 000 FEET

210 000 FEET

(Joins sheet 103)

44°20'00"

116°45'00"

Mann Creek

PACIFIC

RIVER

Concrete

UNION

WEISER

Dead

Man

Gulch

water

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

R. 3 W. | R. 2 W.

240 000 FEET

116°37'30"

44°22'30"

(Joins sheet 89)

985 000 FEET

T. 12 N.

(Joins sheet 96)

(Joins sheet 98)

1 975 000 FEET

270 000 FEET

44°20'00"

116°45'00"

(Joins sheet 104)

Reservoir
Butte
Creek
Camp
Crane
Sugarloaf
water

SCALE 1:24 000

N

116°37'30"
44°22'30"

R. 2 W. | R. 1 W.

300 000 FEET

(Joins sheet 90)

(Joins sheet 97)

(Joins sheet 99)

(Joins sheet 105)

975 000 FEET

985 000 FEET

275 000 FEET

T. 12 N.

CRANE CREEK RESERVOIR

Crane Creek

Mill Creek

South Fork Crane Creek

Reservoir

18 17 16 15 14 13 18

19 24 23 26 25 24 19

30 29 28 27 26 25 30

31 32 33 34 35 36 31

44°20'00"
116°30'00"

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

305,000 FEET

(Joins sheet 91)

R. 1 W. | R. 1 E.

116°22'30"

44°22'30"

985,000 FEET

T. 12 N.

(Joins sheet 98)

(Joins inset, sheet 84)

975,000 FEET

335,000 FEET

44°20'00"

116°30'00"

(Joins sheet 106)

North Fork Spring Creek

Crane Creek

Swamp Creek

Milk Creek

Sheep Creek

SCALE 1:24 000

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

N

117°15'00"
44°20'00"

(Joins sheet 93)

R. 7 W.

140 000 FEET

965 000 FEET

T. 11 N. | T. 12 N.

970 000 FEET

(Joins sheet 101)

110 000 FEET

(Joins sheet 107)

117°7'30"
44°17'30"

SNAKE RIVER

PACIFIC

OREGON
IDAHO

BAKER COUNTY
WASHINGTON COUNTY

BROWNLEE RESERVOIR

UNION 177

DEAD INDIAN RIDGE

Sand Dunes

33 34 35 36
4 5 6
7 8 9 10 11 12
17 16 15 14 13

1 3/4 1/2 1/4 0 1 2 MILES
1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

R. 7 W. | R. 6 W.

145 000 FEET

T. 11 N. | T. 12 N.

970 000 FEET

(Joins sheet 94)

117°00'00"

44°20'00"

(Joins sheet 102)

960 000 FEET

(Joins sheet 100)

44°17'30"

117°7'30"

(Joins sheet 108)

170 000 FEET

Hog Creek

Warm Springs Creek

Rocky Point

Scott Creek

Weiser Warm Springs

SCALE 1:24 000

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

N

116°52'30"
44°20'00"

R. 5 W.

235 000 FEET

970 000 FEET

T. 11 N. | T. 12 N.

960 000 FEET

210 000 FEET

44°17'30"
116°45'00"

(Joins sheet 95)

(Joins sheet 101)

(Joins sheet 103)

(Joins sheet 109)

BARTON RESERVOIR

Jenkins Creek

Monroe Creek

Reservoir

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

117 92 210 000 FEET

R. 4 W.

(Joins sheet 96)

116°45'00"

44°20'00"

T. 11 N. | T. 12 N.

970 000 FEET

(Joins sheet 102)

(Joins sheet 104)

960 000 FEET

235 000 FEET

(Joins sheet 110)

172

44°17'30"

116°52'30"

198

Mann Creek

WEISER

UNION PACIFIC

RIVER

Crane Creek

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

116°45'00"
44°20'00"

R. 3 W. | R. 2 W.

270 000 FEET

(Joins sheet 97)

T. 11 N. | T. 12 N.

970 000 FEET

(Joins sheet 103)

(Joins sheet 105)

960 000 FEET

240 000 FEET

(Joins sheet 111)

60 200

44°17'30"
116°37'30"

Reservoir

Creek

Crane

CANAL

CANAL

SCALE 1:24 000

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

105

N

R. 2 W. | R. 1 W.

116°30'00"

44°20'00"

275 000 FEET

(Joins sheet 98)

T. 11 N. | T. 12 N.

370 000 FEET

(Joins sheet 104)

(Joins sheet 106)

960 000 FEET

300 000 FEET

44°17'30"

116°37'30"

(Joins sheet 112)

Ant Butte

Crane Reservoir

Crane Creek

Tennison Creek

Reservoir

South Fork

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

116°30'00"
44°20'00"

R. 1 W. | R. 1 E.

335 000 FEET

970 000 FEET

T. 11 N. | T. 12 N.

(Joins sheet 99)

(Joins sheet 105)

(Joins inset, sheet 92)

360 000 FEET

305 000 FEET

(Joins sheet 113)

44°17'30"
116°22'30"

Tennison Ridge

Sheep Creek Road

Sheep Creek

BIG FLAT

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

110 000 FEET

R. 7 W.

(Joins sheet 100)

117°7'30"
44°17'30"

955 000 FEET

T. 11 N.

(Joins sheet 108)

950 000 FEET

Olds Ferry

DEAD INDIAN RIDGE

INDIAN HEAD MOUNTAIN

SNAKE RIVER

WASHINGTON COUNTY

MALHEUR COUNTY

Huffman

IDAHO

OREGON

Island

UNION

PACIFIC

Cole Mine Gulch

Cobb

16 17 15 14 13 20 21 22 23 24 28 27 26

153 88 129 51 180 73 74 48 68 2 3 95 190 93

44°15'00"
117°15'00"

135 000 FEET

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

117°7'30"
44°17'30"

R. 7 W. | R. 6 W.

(Joins sheet 101)

170 000 FEET

(Joins sheet 107)

T. 11 N.

965 000 FEET

(Joins sheet 109)

945 000 FEET

140 000 FEET

(Joins sheet 114)

44°15'00"
117°00'00"

SNAKE

WASHINGTON
MALHEUR
COUNTY
OREGON
IDAHO
COUNTY

RIVER

Porters Ferry

Jonathan

Springs

Hog

Warm

Creek

Jenkins

GALLOWAY

UNION

SCOTT

LATERAL

PACIFIC
(OREGON SHORT LINE)

CANAL

SMITH

HEMENWAY

13 18 17 16 15 14 13
20 21 22 23 24
29 28 27 26 25
32 33 34 35 36

1 3/4 1/2 1/4 0 1 2 MILES
1 0.5 0 1 2 KILOMETERS
SCALE 1:24 000

N

R. 6 W. | R. 5 W.

210 000 FEET

(Joins sheet 102)

116°45'00"
44°17'30"

T. 11 N.

945 000 FEET

235 000 FEET

(Joins sheet 108)

(Joins sheet 110)

(Joins sheet 115)

44°15'00"
116°52'30"

Sand Rits

Wash Co. Sanitary Landfill

Reservoir

Creek

Monroe

Sagebrush Hill

GALLOWAY

CANAL

WEISER

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

116°52'30"
44°17'30"

(Joins sheet 103)

R. 4 W.

48

96

118

235 000 FEET

965 000 FEET

T. 11 N.

(Joins sheet 109)

(Joins sheet 111)

945 000 FEET

210 000 FEET

(Joins sheet 116)

115

44°15'00"
116°45'00"

Creek

Mann

Crane Cr.

WEISER

RIVER

UNION PACIFIC

Presley

Bear Creek

CANAL

SUNNYSIDE

GALLOWAY DAM

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

R. 3 W. | R. 2 W.

116°37'30"
44°17'30"

240 000 FEET

180

(Joins sheet 104)

955 000 FEET

T. 11 N.

(Joins sheet 110)

(Joins sheet 112)

345 000 FEET

Reservoir

CANAL

Bear Creek Summit

Bear Creek

Nutmeg Cove

Flat Creek

water

Reservoir

Reservoir

Reservoir

44°15'00"
116°45'00"

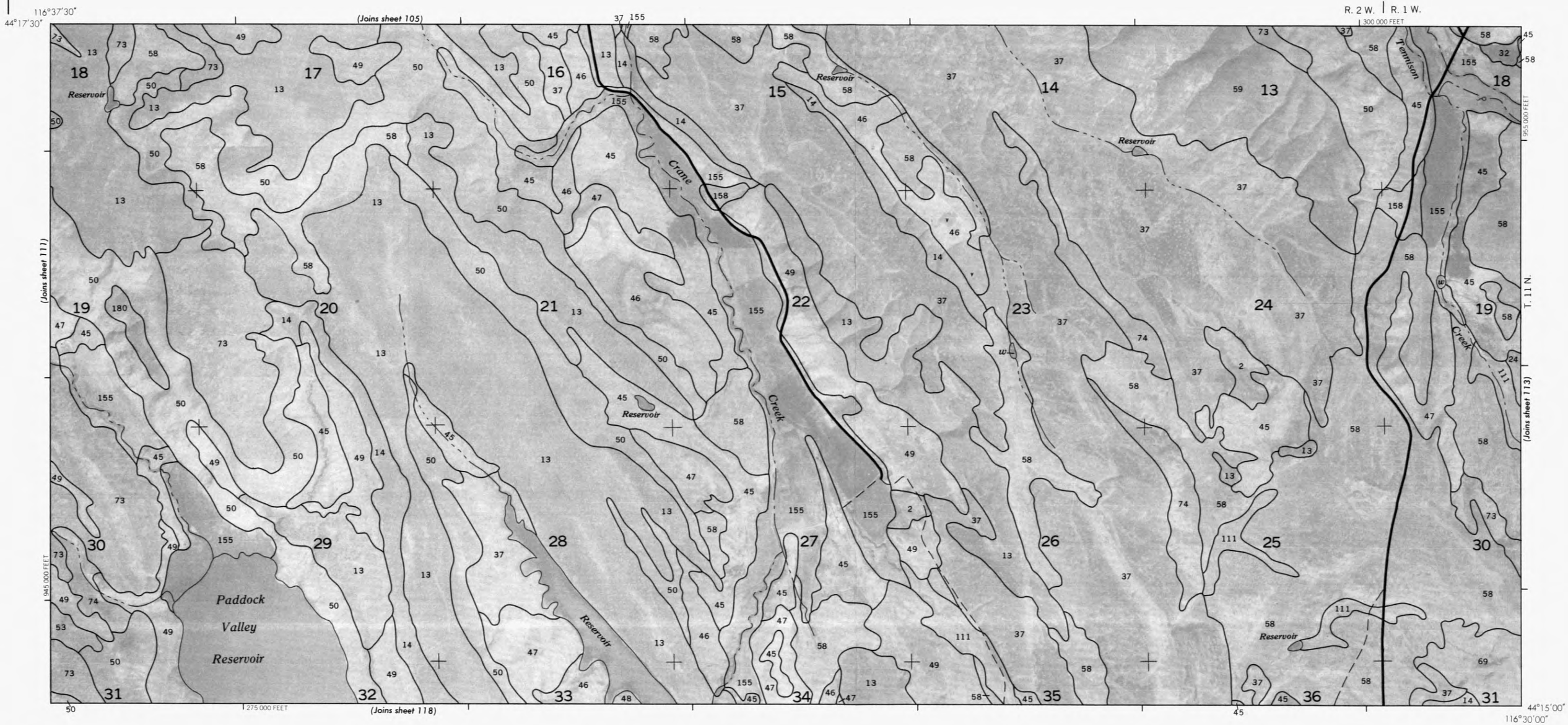
(Joins sheet 117)

270 000 FEET

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000



SCALE 1:24 000

N

305 000 FEET

R. 1 W. | R. 1 E.

116°22'30"

44°17'30"

(Joins sheet 106)

T. 11 N.

955 000 FEET

(Joins sheet 112)

(Joins inset, sheet 120)

945 000 FEET

Tennison Creek

RIDGE

Crane Creek

FLAT

BIG

Denton Spring

Sheep Creek

WILLOW

Crane Creek

Creek

44°15'00"

116°30'00"

(Joins sheet 119)

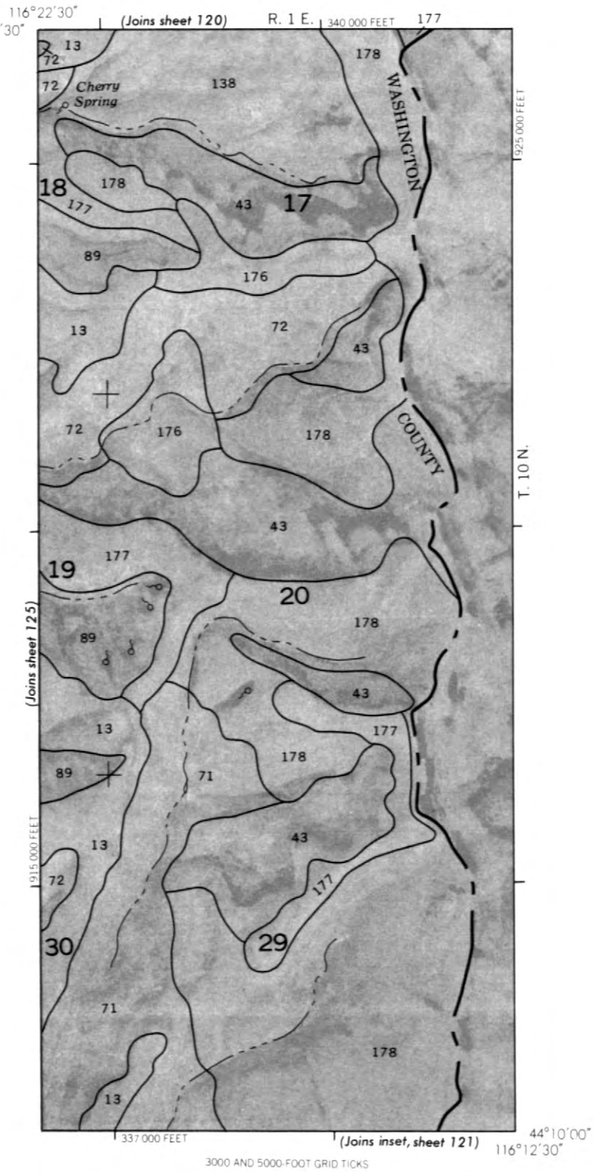
335 000 FEET

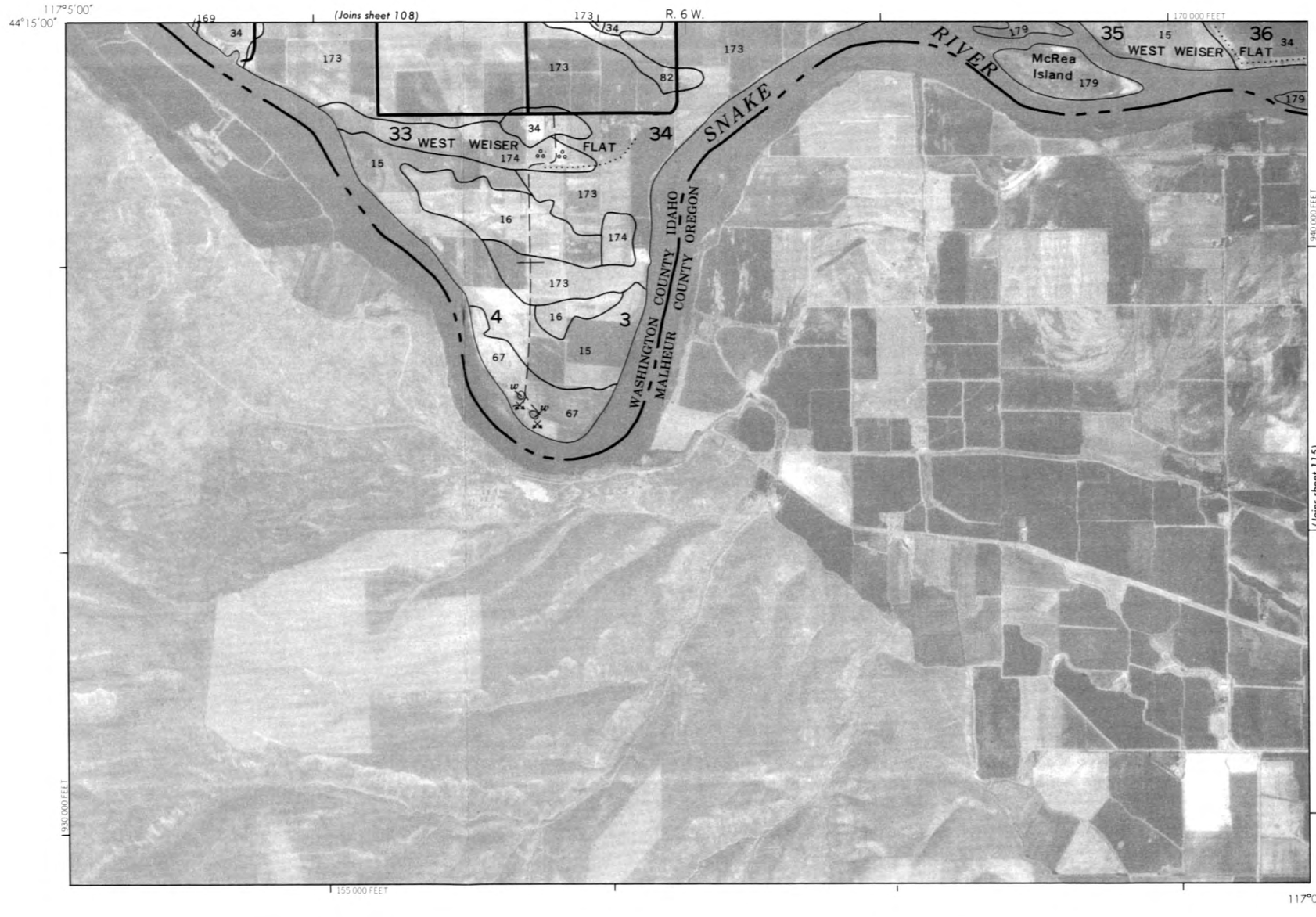
1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N





1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

R. 6 W. | R. 5 W.

175 000 FEET

940 000 FEET

116°52'30"

44°15'00"

(Joins sheet 109)

(Joins sheet 114)

(Joins sheet 116)

T. 10 N. | T. 11 N.

WEISER

WASHINGTON COUNTY

MALHEUR COUNTY

IDAHO

OREGON

Monroe Creek

Wildcat Is.

UNION PACIFIC

WEISER RIVER

Mann Cr

LOWER PAYETTE

OREGON SHORT LINE

CANAL

SNAKE RIVER

Long Island

Weiser Municipal Airport

(Joins sheet 121)

930 000 FEET

205 000 FEET

44°12'30"

117°00'00"

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

R. 5 W. | R. 4 W.

116°52'30"

44°15'00"

(Joins sheet 110)

R. 4 W. | R. 3 W.

235 000 FEET

940 000 FEET

T. 10 N. | T. 11 N.

(Joins sheet 115)

(Joins sheet 117)

930 000 FEET

210 000 FEET

(Joins sheet 122)

44°12'30"

116°45'00"

WEISER

COVE

Rebecca Creek

Mann Creek

Cove Creek

Reservoir

Res

RIVER

CANAL

GALLOWAY

UNION PACIFIC

SUNNYSIDE

DITCH

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

R. 3 W. | R. 2 W.

116°37'30"

44°15'00"

240 000 FEET

(Joins sheet 111)

45

T. 10 N. | T. 11 N.

940 000 FEET

(Joins sheet 116)

(Joins sheet 118)

930 000 FEET

Stinking Water Basin

IDAHO ALMADEN MINE

Wilburn Butte

Creek

Cove

Toe Jam Spring

Canyon

Jam

Toe

Linson

Creek

Cove

Creek

31 32 33 34 35 36 31

6 5 4 3 2 1 6

7 8 9 10 11 12 7

(Joins sheet 123)

44°12'30"

116°45'00"

270 000 FEET

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

116°37'30"

44°15'00"

R. 2 W. | R. 1 W.

300,000 FEET

940,000 FEET

930,000 FEET

275,000 FEET

T. 10 N. | T. 11 N.

(Joins sheet 112)

(Joins sheet 117)

(Joins sheet 119)

(Joins sheet 124)

Paddock Valley Reservoir

South Crane Ck

Sutton Reservoir

Cherry Gulch

Little Willow Flat

Little Willow Cr

44°12'30"

116°30'00"

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

305 000 FEET

940 000 FEET

(Joins sheet 113)

R. 1 W. | R. 1 E.

116°22'30"

44°15'00"

T. 10 N. | T. 11 N.

(Joins sheet 120)

(Joins sheet 118)

930 000 FEET

335 000 FEET

44°12'30"

116°30'00"

(Joins sheet 125)

Tennison Creek

WILLOW RIDGE

BIG FLAT

North Crane Creek

Hog Creek

French Spring

Massman Spring

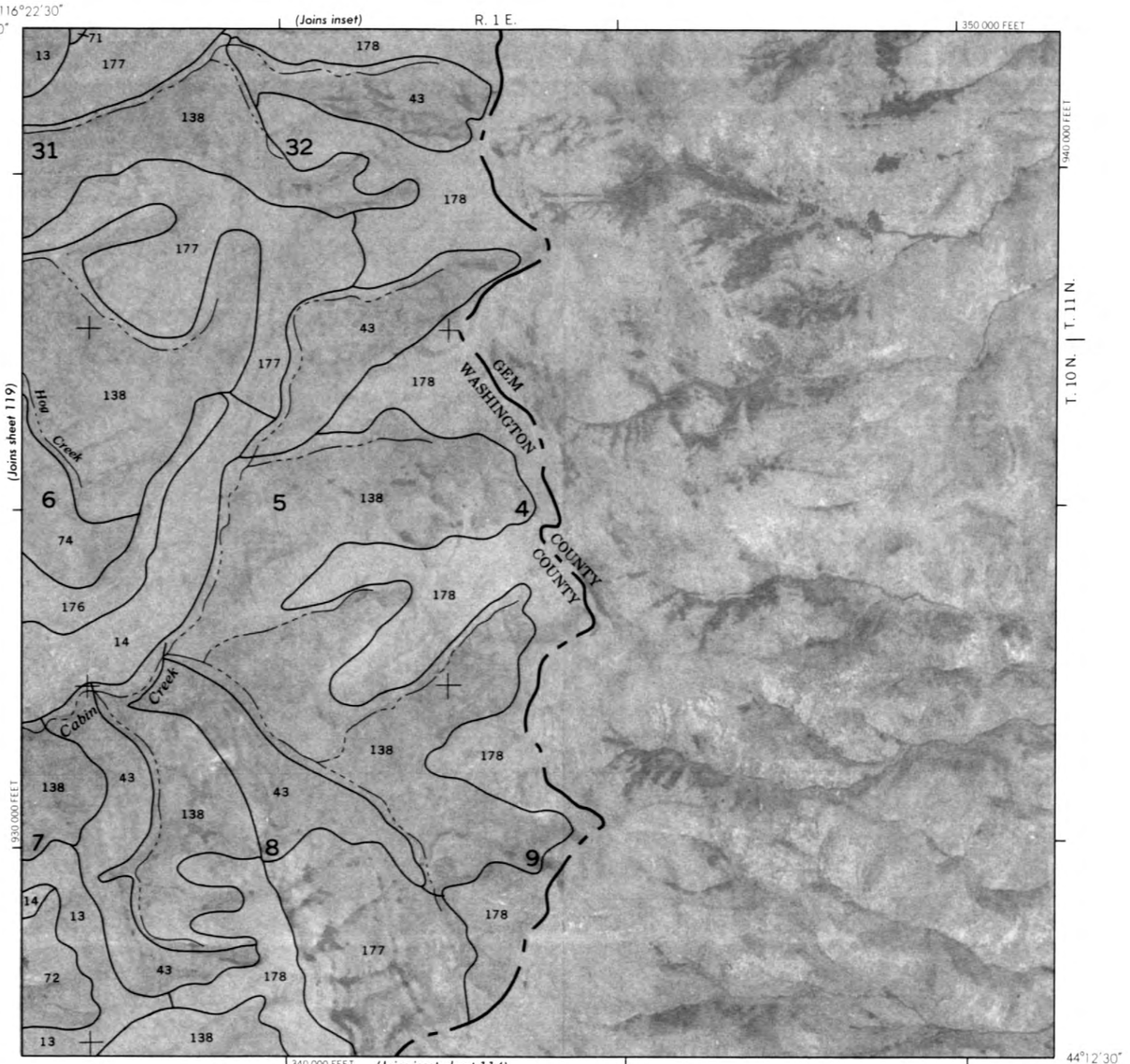
int

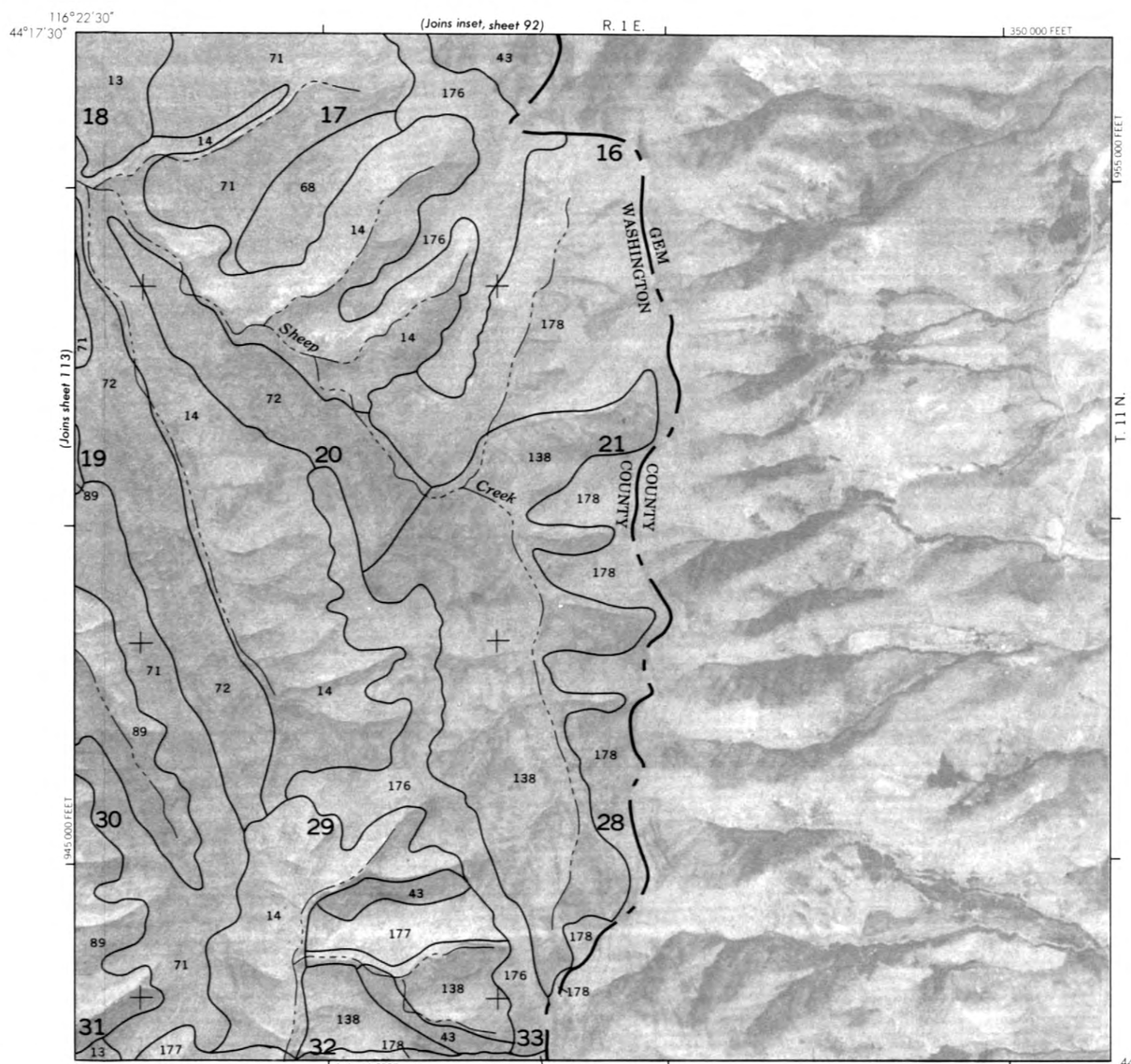
1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N





1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

175 000 FEET

R. 5 W.

116°52'30"

44°12'30"

(Joins sheet 115)

920 000 FEET

T. 10 N.

(Joins sheet 122)

Weiser Airport

Municipal

Smith Island

WASHINGTON COUNTY IDAHO

MALHEUR COUNTY OREGON

Fetham

UNION

Buttermilk

LOWER

PACIFIC

SNAKE

RIVER

Slough

PAYETTE

DITCH

Crystal

(Joins sheet 126)

(Joins sheet 127)

(Joins inset A)

200 000 FEET

912 000 FEET

926 000 FEET

911 000 FEET

906 000 FEET

342 000 FEET

204 000 FEET

4000-FOOT GRID TICKS

R. 5 W. (Joins lower right)

116°52'30"

44°10'00"

OREGON SHORT LINE

WASHINGTON COUNTY

PAYETTE COUNTY

R. 1 E. (Joins inset, sheet 114)

116°21'00"

44°10'00"

WASHINGTON COUNTY

GEM COUNTY

T. 9 N.

44°9'00"

116°54'00"

116°22'30"

337 000 FEET

44°10'00"

117°00'00"

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

R. 5 W. | R. 4 W.

116°52'30"

44°12'30"

(Joins sheet 116)

235 000 FEET

R. 4 W. | R. 3 W.

925 000 FEET

T. 10 N.

(Joins sheet 121)

(Joins sheet 123)

915 000 FEET

(Joins sheet 126)

210 000 FEET

44°10'00"

116°45'00"

Reservoir

Res.

SCALE 1:24 000

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

123

N

R. 3 W. | R. 2 W.

116°37'30"

44°12'30"

240,000 FEET

925,000 FEET

915,000 FEET

270,000 FEET

T. 10 N.

(Joins sheet 117)

(Joins sheet 122)

(Joins sheet 124)

(Joins inset, sheet 126)

44°10'00"

116°45'00"

Holland Gulch

Linson Creek

Sand Hollow

Holland Gulch

SCALE 1:24 000

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

N

116°37'30"
44°12'30"

R. 2 W. | R. 1 W.

300,000 FEET

(Joins sheet 118)

(Joins sheet 123)

925,000 FEET

T. 10 N.

915,000 FEET

180

275,000 FEET

(Joins sheet 127)

(Joins sheet 125)

44°10'00"
116°30'00"

Paddock Valley Reservoir

McCullough Gulch

Willow Creek

George Way Gulch

Linson Creek

Little Willow Creek

Rattlesnake Creek

18 17 16 15 14 13 18

19 20 21 22 23 24 19

30 29 28 27 26 25 30

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

125

N

305 000 FEET

925 000 FEET

(Joins sheet 119)

R. 1 W. | R. 1 E.

116°22'30"

44°12'30"

T. 10 N.

(Joins sheet 124)

(Joins inset, sheet 114)

915 000 FEET

335 000 FEET

(Joins inset, sheet 127)

44°10'00"

116°30'00"

George Gulch

Way

Big Willow Creek

1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N

R. 5 W. | R. 4 W.

116°52'30"

44°10'00"

(Joins sheet 122)

235 000 FEET

912 000 FEET

T. 10 N.

(Joins lower left inset)

(Joins inset, sheet 121)

907 000 FEET

205 000 FEET

Cherry Gulch

WASHINGTON COUNTY

PAYETTE COUNTY

44°9'00"

116°45'00"

116°45'00"

44°10'00"

(Joins sheet 123)

R. 3 W. | R. 2 W.

270 000 FEET

912 000 FEET

(Joins sheet 127)

(Joins upper right)

907 000 FEET

240 000 FEET

Hollow

Sand

Wet Gulch

HOLLAND GULCH

Willow Creek

WASHINGTON COUNTY

PAYETTE COUNTY

T. 10 N.

T. 9 N.

44°9'00"

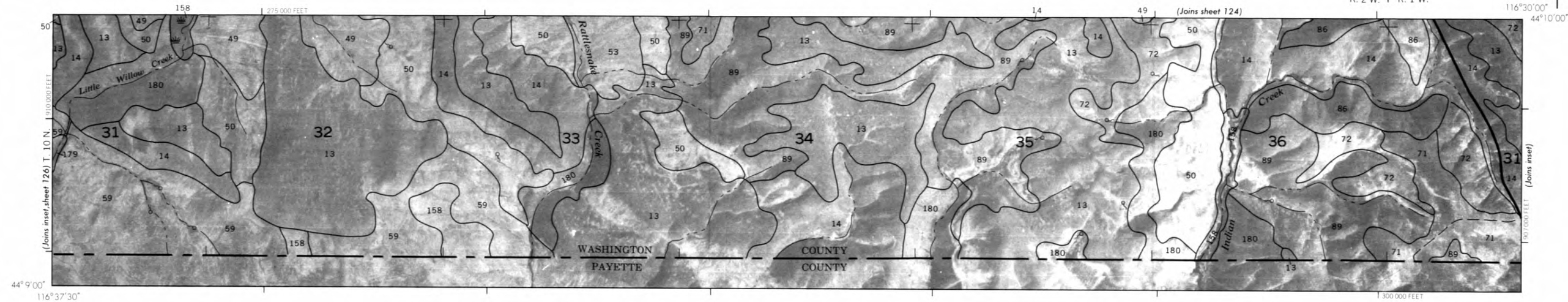
116°37'30"

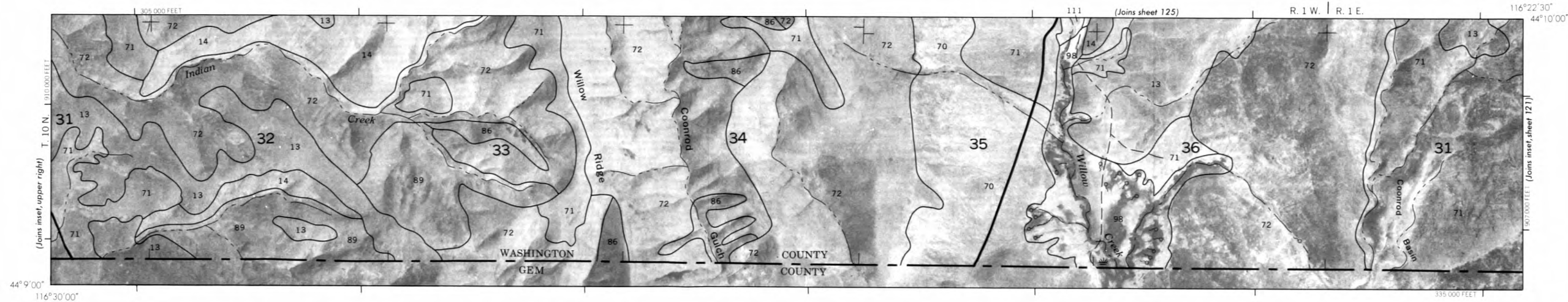
1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

SCALE 1:24 000

N


275 000 FEET
R. 2 W.
R. 1 W.
116°30'00"
44°10'00"
(Joins sheet 124)
Little Willow Creek
Rattlesnake Creek
Creek
Indian
WASHINGTON COUNTY
PAYETTE COUNTY
(Joins inset, sheet 126) T. 10 N.
910 000 FEET
907 000 FEET
(Joins inset)
44°9'00"
116°37'30"
300 000 FEET


305 000 FEET
111
(Joins sheet 125)
R. 1 W.
R. 1 E.
116°22'30"
44°10'00"
Indian Creek
Willow Ridge
Coonrod Gulch
Willow Creek
Coonrod Basin
WASHINGTON COUNTY
GEM COUNTY
(Joins inset, upper right) T. 10 N.
910 000 FEET
907 000 FEET
(Joins inset, sheet 121)
44°9'00"
116°30'00"
335 000 FEET

1 3/4 1/2 1/4 0 1 2 MILES
1 0.5 0 1 2 KILOMETERS
SCALE 1:24 000